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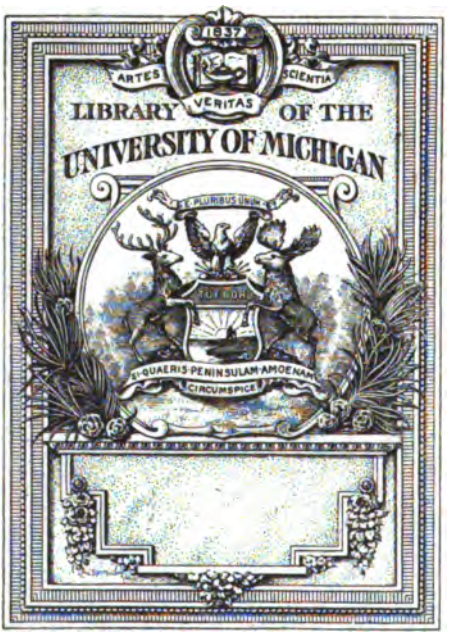
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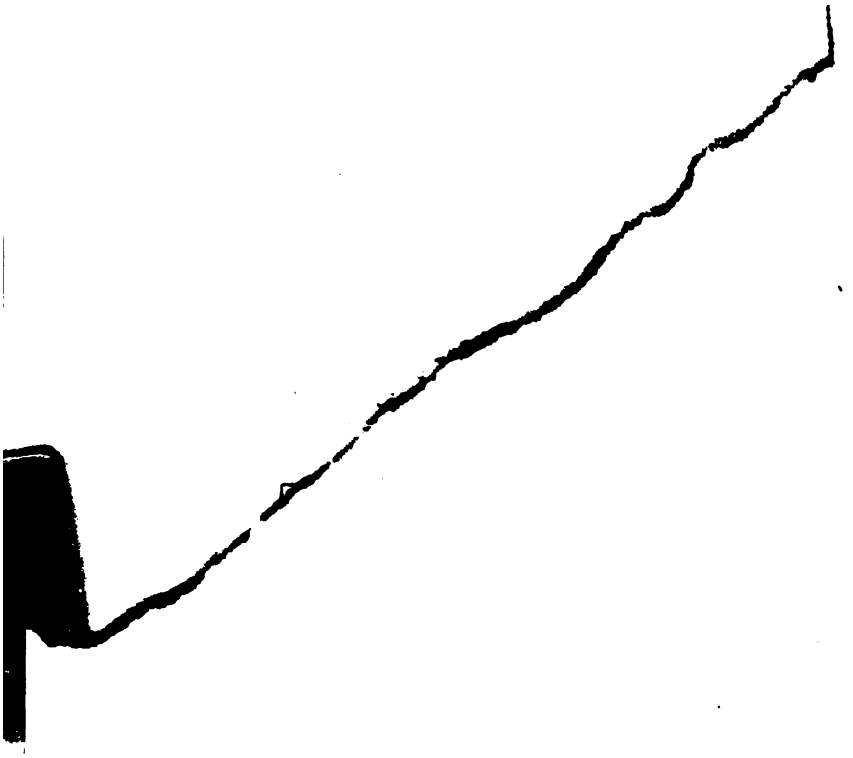

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CONSULAR REPORTS

ON

COMMERCE, MANUFACTURES ETC.

No. 88.—JANUARY, 1888.

FOREST CULTURE IN HESSE.

REPORT OF COMMERCIAL AGENT SMITH.

This report is a compilation of two books, which I understand to be official publications of the Hessian Government, and I think will be found to contain the statistics and general regulations of that Government governing the administration of the forests, leaving out of consideration the many ifs, buts, and howevers which must necessarily be met with in any book of regulations. There may be, however, some passages which I have omitted which another person might think of note, and I shall forward the books to the Department by the next mail for use, should a more extended abstract of them be desired to be made. Regarding the actual treatment of forest trees during growth little seems to be said. That, I suppose, is expected to be obtained from technical and scientific works on the subject, to whose study and object a consular officer has no time at command in connection with his other official duties; that is, I mean it is not introduced by the Hessian Government in the books before me, because the members of the forest service are supposed to make themselves acquainted therewith in preparing for the service. It seems to me that it would be well for the Government of the United States before initiating any forest legislation to send out experts to study the forest systems of other Governments, especially of Germany. Information thus obtained would be of far more value in practical respects than that supplied by consuls. I am led to these remarks from having met in this vicinity last winter a gentleman connected with the forest service of Russia who had been sent off for two years to inquire into and make himself familiar with the forest systems of other countries, such as Switzerland, France, Germany, etc. Speaking French and German fluently, and knowing just what he wanted, he was able to gather information of just the right kind readily.

I.—Areas under Forest.

The Grand Duchy of Hesse, situated in the central part of Germany, lying between the degrees of 49° 24′ and 50° 51′ north latitude, and 25° 32′ and 27° 19′ east longitude, with an area of about 2,975 English square miles, divided into two parts by a narrow strip of Prussian territory, one designated as the province of Upper Hesse and the other as the provinces of Starkenburg and Rhine Hesse, has the following areas of forest land, according to provinces, namely:

Statement showing the amount of forest land in Hesse in 1883.

Provinces.	A.—Under management of foresters.					B.—Not under such management.				Total of A and B.
	Belonging to the state, state hospital, and state orphan asylum.	Belonging to the reigning family.	Share of third parties in common forests.	Belonging to communes, corporations, etc.	Total of A.	Under management of building department, etc. (pasture tracts, etc.).	Private forests.		Total of B.	
							First class.	Second class.		
Starkenburg and Rhine Hesse	*Acres.* 157	*Acres.* 76,662	*Acres.*	*Acres.* 148,072	*Acres.* 224,891	*Acres.* 3,415	*Acres.* 51,632	*Acres.* 64,290	*Acres.* 119,337	*Acres.* 344,228
Upper Hesse	2,562	87,237	4,277	86,527	180,608	22	81,145	6,665	87,832	268,435
Total	2,719	163,899	4,277	234,599	405,494	3,437	132,777	70,955	207,169	612,663

These are again classified, according to a census taken in 1883, into forest areas of low (or topped) medium, and high growth, as follows:

Statement showing the amount of low (topped) growth, intermediate growth, and regular forest growth, and whether governmental, corporate, or private.

	Low (topped) growth.			Intermediate growth.	High, or regular forest growth.					
	Topped oaks grown for bark.	Topped willows.	Other growth from trunks with no upper limbs.	Growth from trunks having upper limbs.	Oaks.	Birches, alders, and aspens.	Beeches and other foliaceous trees.	Pines.	Larches.	Firs, etc.
	Acres.	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*
Governmental	11,080	2,225	325	2,967	19,752	1,680	84,410	40,465	332	6,300
Communal, or corporate	26,560	27	1,145	377	15,257	1,207	89,895	89,747	485	10,660
Private	28,237	1,377	3,970	3,362	4,832	1,500	72,867	76,960	1,312	12,201
Total	65,877	3,629	5,440	6,706	39,841	4,397	247,172	207,172	2,129	29,161

This would make the relative proportions as follows:

	Per cent.
Young oaks for bark	10.8
Topped willows	0.6
Other growth without upper limbs	0.9
Low growth	12.3
Growth from trunks with upper limbs	1.1
Medium growth	1.1
Other leaf-bearing trees:	
Oaks	6.5
Birches, alders, and aspens	0.7
Beeches and other foliaceous trees	40.4
Pines	33.9
Larches	0.4
Firs	4.7
High growth, consisting of 47.6 per cent. of foliaceous trees and 39 per cent. of coniferous trees	86.6
Total	100.0

II.—Common Forests.

The Government informs me that in Hesse there are no forests for common use.

III.—Organization and Functions of Forest Bureaus.

The forests of the duchy are all under a forest-police control.

The entire Grand Duchy of Hesse is divided into nine forests, which I shall always refer to as districts, and these again into seventy-one divisions, which I shall designate as ranges, and in addition there are twenty-one provisory forests in baronial precincts where there are no state or Crown lands, and where there are no communal forests of sufficient size to form forest districts under the direction of the state. Each division of a district or range is again subdivided into smaller circuits or tracts, which I shall speak of as keeps, directed by an ordinance of 1823 to consist, on the average, of 500 hectares (1,235 acres) of forest land in each case, with certain exceptions. The officers I shall name as follows: Over the large districts, chief foresters; over the divisions or ranges, rangers; for the circuits or small tracts, keepers. These are all under the management and control of a bureau in the finance department of the Government called "the bureau for forest and cameral administration," which is in turn subject to the department under which it is placed. In certain cases the department of the interior and justice has also jurisdiction.

The forests are known as Crown or state, communal, and private. The Crown or state forests belong partly to the reigning house and partly to the state—mostly to the former—and are, of course, administered by the Government. Communal forests are those belonging to communes, corporations, societies, churches, and the like. These are governed pretty much in the same way as the aforementioned, except that the bureau for forest and cameral administration is in their case placed under the direction of the department of the interior and justice. With respect to their technical management the

officials of the communes, etc., have only an advisory voice.* The communes pay into the state treasury for compensating the rangers 1.07 mark (25 cents) per hectare (2½ acres). The private forests are left to the control of their owners, but no partition or rooting up of them can take place without ministerial approval. They are known as private forests of the first and second classes, the proprietors of the first mentioned having men to manage them recognized by the state as experts, and the second being of a nature not to require such supervision.

The ranges embrace Crown, communal, and private forests, together with cameral lands, according to convenience.

The keeps consist sometimes only of Crown forests, sometimes only of communal or private forests, and sometimes of both together. In Crown forests they are organized by the upper forest officials, with the approval of the state. In the baronial and private forests of the first class the owners have the right of organization; in the other private and communal forests the organization is effected by the bureau for forest and cameral administration, in conjunction with the respective bailiwicks, with the understanding, however, that they are to be governed as a rule by the wishes of the local officials of the place.

All keepers, with the exception of those employed in baronial and private forests of the first class, have to pass an examination before appointment. They must be able to read with ease both written and printed matter, readily pronounce figures; write down with rapidity, exactness, and clearness dictated sentences; enter into the proper blank form notice of a trespass; be familiar with the four leading rules of arithmetic, fractions, and decimal fractions, and have knowledge of the chief regulations concerning the administration of the forests. The names of aspirants for positions in communal forests and private ones not of the first class are presented by the owners thereof to the Government for appointment, which confirms when there is no objection. Their pay is also regulated in a similar manner. An appeal lies to the department of the interior and justice in each case.

Owners of baronial and private forests of the first class appoint their foresters without any intermeddling on the part of the state. Aspirants for appointment into the forest service of the state, after having passed a satisfactory examination, are employed on trial for six months before receiving a permanent appointment. During this time they are paid about 40 cents a day.

The keepers in the Crown forests of regular size, with respect to salary, are divided into three classes, sixty-two in the first, fifty-eight in the second, and fifty-three in the third, the first receiving about $250 a year, second about $225, and the third about $200, and are promoted from one class to another generally, according to length of service. In the keeps of irregular size the keepers are paid less than the foregoing, and according to size of charge. The pay of the keepers in the service of communes and corporations is regulated by the state, and also in the case of private forests sometimes. When the dwelling places they inhabit are the property of the Crown, keepers of the first class pay as rent about $14 a year; those of the second class, about $12; those of the third, about $11. Of one hundred and seventy-three keepers in the employ of the Crown,

*See close of report for further information in regard to them

eighty have such houses. And where there is pasture and farm-land they receive for a small rent enough to carry on farming on a small scale.

It is the duty of the keepers to keep a strict watch over the small tracts confided to their care, and to superintend all work done in the forests, especially wood felling. They are expected to make daily rounds, and even nightly when necessary, of the respective keeps, to prevent, detect, and stop all trespassing, bring the trespassers to justice, look after and keep in good condition all ways, boundary marks, etc., to provide against forest fires, and see to their extinguishment when they arise, to keep themselves posted as to the increase of all insects, birds, and animals injurious to forest trees, report their presence, and adopt and recommend means for their diminution, and to note all causes prejudicial to their respective forests.

With a view to discourage trespassing and fixing trespassers, they are expected to make themselves familiar with the names and faces of all people living in their districts, and with the arts and practices of trespassers. They must also aid one another in the discharge of their duties. They are required to be men of character, with a reputation in the localities where they dwell, and exercise their functions for respectability and correctness of deportment, not given to drunkenness, or to such attendance on public houses, or such conduct as would cause the public to regard them with disfavor. They can not accept any other official position without the express permission of the Government, or additional service, nor undertake particular superintendence of forests within or without their districts not prescribed by their instructions, nor undertake any special care of game.

They are not allowed to deal in wood or coal, and are forbidden to make charcoal for themselves and sell it, and without special permission are not allowed to give wood to others. They are prohibited from collecting brush and fire-wood, or cutting or pulling up grass, unless specially permitted to do so, nor can they do any business or engage in any kind of enterprise that will interfere with their duties as keepers of the forest. They are not allowed, as a rule, to have anything to do with the money matters of their forests. At auctions of forest products they can not bid for themselves or others. Under certain conditions they can use the forest pastures. Waste and litter they can only take in Crown forests with the permission of the finance department of the Government.

Whatever rights they enjoy in common with other members of the community in which they live respecting the forests prior to their entry into the forest service they continue to hold as keepers, unless indemnified for their withdrawal. In private forests the assent of the proprietors is all that is necessary as a rule to grant rights to the use of wood, etc., but the Ducal Government has the right to forbid the exercise of any grant which seems disadvantageous to the service. Lastly, they are not allowed to receive presents, rewards, or recognitions of any kind for services rendered in the discharge of their official duties without the approval of the Government.

The keepers are subject immediately to the rangers of their districts, and mediately to the chief forester. Carelessness in the discharge of their duties or willful violations subject them to fines and supervision or dismissal from the service, and even to legal process. They have to report to the rangers as often as is called for by their instructions and duties, and to give notice of all occurrences in their keeps, lay before them their memorandum books and trespass lists,

and make such communications as they may be called upon from time to time to render. As a rule they are required to lay all matters before the rangers over them, and only before the chief foresters when it is something that concerns the former or has been neglected by them, or when, in case of danger from delay, decisions can be obtained quicker from the district offices.

The keepers have to manifest the same zeal and faithfulness in the case of communal and private forests as in those belonging to the Crown, and to show no partiality. They have to keep the owners of communal and private forests or their representatives apprised of what is going on in them. They are to be governed by the views and desires of the local offices of the place where the forests are situated so far as they concern their official duties, and do not conflict with instructions from higher authorities. They are required to report as faithfully to the rangers all acts done by the owners or administrators of communal and private forests in conflict with the forest laws and regulations of the Duchy as acts of trespass and depredation committed by those who have no right to the forests.

They can carry hunting arms when it is not prohibited by the Government. Side arms they are allowed to carry only when in uniform. To carry pistols they must get permission from the Government.

All official papers and articles they have to carefully preserve when of that nature, and turn over to their successors in office.

TRESPASSING.

The keepers are instructed to endeavor to come upon all trespassers while in the act of committing a trespass, and to prevent its completion. The State asks prevention rather than the report of trespasses. The activity of a keeper is not judged by the number of cases of trespasses he reports, but by the prevention and absence of them in his district. When it is possible, they are to accost trespassers and to loudly call out their names when they are known, and when not to ask for them. They are to take away stolen articles in coming upon the deed only when the articles are of importance in proving the offence or can be well used by the proprietors of the forest, or when by doing so a material damage can be avoided. The keepers have to bring to a place of safety or leave in the forest all articles taken from trespassers or left behind by them, and to force trespassers to carry back stolen objects to the places from which taken by them when it can be done.

From poachers and others carrying arms in the forest without authority they are to demand the surrender of their weapons, and to take them away when it can be done without the employment of force. All cattle running at large without any known shepherd they are to have turned over to the police. When in carrying out their instructions they find it necessary to be supported by others they are to appeal to their rangers for assistance, and in pressing cases call in the aid of the gendarmerie, wood-cutters, etc. In preventing and stopping trespassers and depredations they are enjoined not to maltreat or do violence to any one, but in cases of extreme necessity they have a right to use arms. When arms are made use of they must at once inform their rangers and the proper courts thereof. To their victims they must render all needful assistance as soon as they can do so with safety to themselves, and if the result of the use of weapons

can not be ascertained, the police are to be requested to aid in discovering it.

The forest keepers have to always carry with them a hammer provided with a stamp like this, F, which serves as a symbol of office, and is used in stamping wood taken from trespassers of sufficient size or having the appearance of having been improperly felled, as evidence of their official action.

It is the duty of the keepers to fix the author of every trespass and obtain proof of the trespass. In doing so they are allowed to traverse forbidden ways, and to stop suspicious vehicles, animals, or persons by which wood or other forest products are being transported, and conduct them to the police, when they can do so without exercising force or creating tumult, and search houses in pursuit of stolen objects. This latter can be done at night, only when the capture of a trespasser or of his spoil brooks no delay.

Either to or from a house searching they can take forest products to make comparisons for purposes of identification. The police are required to render the keepers assistance in house searching when asked.

The keepers receive from the rangers a bound memorandum book for the pocket, with printed forms for noting down trespasses and offenses. In this book they have to note down, immediately upon discovery of a trespass, whether the author be known or not, and a brief description of the trespass committed, so far as they have learned it, so that they can enter it in their trespass lists reliably and fully. Where possible, they must put in their memorandum books the time of discovering the trespass, the name and place of residence of the author, the place where it was committed, and the things trespassed upon, mentioning the kind of wood, amount, dimensions, value, etc. Each trespass is to have a separate running number, each series of numbers to run through a memorandum book, and a new series to begin in a new book only. These memorandum books are to be numbered on their title pages, and on their covers are written the dates of their commencement and conclusion. These books belong to the official effects of the keepers. The entries of each day are required to be kept separate. The keepers have to always have their memorandum books with them. They not only have to show it to the rangers for revision, but to let other keepers see it in reference to the connection of trespassers to one another.

They are expected to be particular about names. If through their delay or negligence they fail to obtain names of trespassers and a description of their acts, they themselves will be called upon to bear the cost of inquest. Within twenty-four hours after notes are made in their memorandum books they must write out the whole matter in full in ink in their trespass lists in the following form:

Place, ——. Section, ——. Term of forest court, ——, 18—. Keep, ——. Month, ——.

Running number.	Date of the discovery of the trespass.		Family and Christian names of the accused; character of the offense; estimate in figures of value and damage.	Owner of forest and place of trespass.
	Month and day.	Time of day and hour.		

They are forbidden, under a heavy penalty, to change or strike out anything once written in their trespass-book, be it favorable or unfavorable to the accused. If new circumstances afterward come to light they enter them in a new place and refer thereto where the first notes are. The keepers have to have a particular leaf for each place. These lists of trespasses or certificates that no trespass has taken place the keepers have to render once a month to their immediate superiors, in person, if possible. At the same time with the rendition of their lists of trespasses, keepers appointed or confirmed by the State have to submit for each term of the forest courts tabular statements like the following:

Range ——.] [Keep ——.

TABLE A.—*List of trespasses committed in the forest judicial year* 18—, *whose authors have not been discovered.*

Forest court term.	Name of district.	On dressed wood.										On growing wood.								On side products.			
		Hard foliaceous wood.				Soft foliaceous and coniferous wood.				Estimated value.		Hard foliaceous wood.		Soft foliaceous and coniferous wood.		Estimated amount in burdens.*	Estimated.			Green grass.	Straw.	Estimated value.	
		Fire-wood.		Building wood and timber.		Fire-wood.		Building wood and timber.				Predominating.	Growing under other growth and dry.	Predominating.	Growing under other growth and dry.		Value.		Damage.				
		Cubic feet.	Burdens.*	Pieces.	Cubic feet.	Cubic feet.	Burdens.*	Pieces.	Cubic feet.	$	Cts.	Trunks and limbs over 2½ inches in diameter.					$	Cts.	$	Cts.	Burdens.*	$	Cts.

* What can be carried on the back.

Range ——.] [Keep ——.

TABLE B.—*Exhibit of trespass announcements during the forest judicial year* 18—.

Forest court term.	Number reported.				Of those reported there concern—								The trespasses in the keep, whose authors have not been discovered, amounted in value to:						Remarks of the ranger concerning the activity of the reporting keeper during the year.
	Total.	Discovered or established.			Wood trespass:					Pasture.	Grass.	Straw.	Other.	Dressed wood.		Growing wood.		Green grass and straw.		
		By day.	By night.	Through house searching.	Dressed wood.	On green wood. With.	On green wood. Without.	On dry wood.	Total.	Of these was committed with instruments—	Trespass.									
						Damage.								$	Cts.	$	Cts.	$	Cts.	

During the first five terms of court the rangers, after inspection, return these tables to the makers, who have to enter on the same sheets all the results of the six terms, and on rendering for the last have to sum up the whole. The rangers then examine the whole and note the activity of the keepers. Where the keepers make very frivolous charges, accompanied by the discharge of persons implicated, they are severely punished and made to bear the costs of the proceeding.

In order to show their activity and the degree of trespassing, keepers, in addition to the two tables already given, are required to make out two other tables like the following:

TABLE C.—*Exhibit of forest trespasses reported in judicial year* 18—.

Forest.——.] [Range ——.

Description of trespass.	Number of the cases of trespass reported by the keepers of the district.	Of other complaints.	Total number of cases of trespassing.	The trespasses whose authors could not be learned amounted in value to—						
				On dressed wood.		On growing wood.		On green grass and straw.		In the forest keep.
				$	Cts.	$	Cts.	$	Cts.	

TABLE D.—*Exhibit of the cases of trespassing reported to and passed upon by the forest courts in* 18—.

Forest ——.] [Left arrangement.] [Forest judicial district.

Ranges.					Of the trespasses reported these relate to—								
	Size.				Trespassing on wood.					Pasture.	Grass.	Straw.	Other.
Name.	Demesne.	Communal.	Private.	Total.	On dressed wood.	On growing wood.		On dry wood.	Total.	Of which were committed with instruments.				
	Forests.					With.	Without.				Trespass.			
	Acres.					Damage.								

TABLE D.—*Exhibit of the cases of trespassing reported, etc.*—Continued.

[Right arrangement.]

Summary of notices of trespass.	Average number per hectare.	The forest courts adjudged.		Fine in money.	Imprisonment.	The trespasses whose authors could not be learned amounted in value to—					
		Indemnification for actual value.	Indemnification for damages.			Dressed wood.		Growing wood.		Green grass and straw.	
		Dollars.	Dollars.		Days.	$	Cts.	$	Cts.	$	Cts.

Table A is to be made up at the end of each year by the rangers, and to be submitted to the chief foresters with the two tables just referred to by me. So soon as the registers and records of the decisions of the general courts in special cases of investigation have been received by the chief foresters after the rendering of sentences these rangers have to extract therefrom the damages recognized and the fines and penalties imposed, and enter them in the table whose form is last given, when they are further filled up by the bookkeepers.

The chief foresters are required to examine Tables A, B, and C, and see that they are correct and send them, before the end of July of the next year, with Table D, to the directive offices, at the same time calling their attention to the irregularities.

The rangers are expected to see to it that the instructions given to the keepers are carefully observed, and particularly that they are enterprising in the discovery and prevention of trespasses.

Whenever trespassing accompanied by force takes place, especially combinations for trespassing, the local forest authorities, particularly the rangers, have to collect together the keepers and other persons employed in the forests and proceed against the culprits. When this is not sufficient, gendarmes or military are called for.

The keepers have to appear at the forest courts, when called upon to do so by the rangers, in uniform. They have to superintend prison workmen laboring in the forest when directed to do so, report all absentees and delinquents to the rangers, and keep a record of the work done.

The keepers in the private forests belonging to their districts have to see to the protection of trees and give notices in the same way as in governmental and communal forests, and they are to notify the rangers promptly of any acts committed in them contrary to the laws of the state.

The keepers are also enjoined to aid the rangers in all subordinate forest affairs where mere mechanical and unskilled under-work is concerned, so far as their special duties protective of the forest admit of it.

The keepers have to keep themselves informed of the amount of wood intended for delivery. In the absence of the wood stackers or bosses, the keepers have to count or measure off, by direction of the

rangers, wood or other forest products intended for delivery. The keepers receive each year, for the governmental forests, as well as for each communal forest, two so-called number books—one for building wood and timber and one for fire-wood—in which to keep an account of the wood delivered, etc.

In counting off wood in the governmental forests the following rules have to be observed:

The rangers, with the aid of the keepers, have to see that the right quantity of wood is felled and counted off in each case, and to stamp it with their hammers. An entry of the quantity sold has to be made in the number book without delay as soon as it is ready for delivery, and the number book must be compared with the delivery checks of the bosses and made to agree, and at once handed to the rangers, who sign a record of the count. In counting off wood a ranger has to call to his side the keeper of the place, the particular wood stackers, and the superintendent of the wood cutters. In counting off, the keeper usually has his two number books in his hands, and the ranger a statement of the count; the former enters each number in his book, and the ranger does so in his statement, or checks it off if it is already there; or the ranger can take the number book himself and carry it home and there make the comparison, after the entry in the number book by the keeper and himself. When standing wood, or wood not completely assorted, is delivered, its value must be carefully estimated, and entered in the number book in a similar manner to the foregoing, with the remark in what state delivered.

When the chief rangers make an inspection of a control character the keepers have to be present, but the rangers hold the number books. The rangers' statements of counts the keepers have to sign with them. In the case, too, of small fellings, up to the amount of 12 solid meters, the keepers have to be present at the counting and enter these, as well as all and every piece of wood felled or delivered, and also that carried off by trespassers, in their number books, and certify to them in the quarterly statements. All counting of bark, and litter, and such things, the keepers have to attend at the direction of the rangers, and enter the results in their books in accordance with the facts, and certify thereto with the rangers in the statements of the latter.

The foregoing regulations with respect to counting off wood apply also to communal forests. After a comparison of the figures of each felling, the keepers turn their number books over to the burgomaster, or representative of the proprietor of the forest, to make up the record. After a count has been made the number books, as well as the statement of the count, have to be signed by the ranger, burgomaster, and keeper concerned.

After a count is completed the keepers receive back their number books.

When at the close of the fiscal year natural stock is on hand, a statement to this effect is to be drawn up by the burgomaster, controller, and keeper together, and the reason given why it exists, and the return attached to the financial report of the commune for the year.

The keepers are charged with seeing that forest products are taken away only by those who have a right to them; and without their knowledge is no wood, etc., to be carried off.

The delivery of wood is governed by the following instructions:

None is to be delivered until properly counted off and converted into natural receipts, except small wood gathered up on certain days by those enjoying the right.

None to be carried from the governmental forests until so directed in writing by the rangers, except in the following instances:

(1) The keepers, without waiting for the concurrence of the rangers, can dispose of and deliver wood taken from trespassers up to a meter when the circumstances are such that it can not be brought to a place of safety, but they are to inform the rangers of such action within eight days thereafter, and to make a note of it in their number books and in their trespass lists. The rangers can also at once dispose of wood taken from trespassers which the keepers have failed to turn to account, without previously entering it in their quarterly statements, when it is not adapted for auctioning off and does not amount to more than 12 solid meters, and likewise do the same with wood thrown down by the w nd and other causes; and the keepers can deliver such wood at the verbal direction of the rangers without waiting for delivery checks. The keepers can not dispose of wood cast down by natural causes, but must inform the rangers of its existence.

In communal forests the burgomasters, and in forests belonging to corporations their representatives, take the place of the rangers with respect to the writing of orders for the delivery of wood and the making out of receipts.

It is the duty of the keepers to see that the buyers and renters of pieces of forest ground or of forest rights conform to the conditions under which made. All violations they report to the rangers.

When keepers are required to absent themselves from their keeps their duties are usually attended to by wood stackers or bosses.

RANGERS AND CHIEF FORESTERS.

For the higher positions in the forest service a certain degree of education is demanded. A candidate is required to show that he has creditably passed through a grammar school, as well as spent three years at a university. At the university he must have passed two examinations, a preliminary one and a professional one. The preliminary examination must embrace: (1) pure mathematics, including algebra, analytical geometry, and the elements of differential and integral calculus; (2) field surveying; (3) physics, including mechanics; (4) chemistry, technical chemistry; (5) universal botany, forest botany, and forest climatology; (6) geognosy and the nature of forest soils.

The professional examination must embrace: (1) science of forestry, encyclopedia, and methodology of the science of forest cultivation, including forest history, further forest cultivation, protection (including a knowledge of forest insects), usufruct, forest technology, regulation of forest products, forest calculation and statistics, building of forest roads, forest surveying, forest partition, measurement of wood, forest economics; (2) social economy, theoretical national economy, and chief principles of science of finance; (3) science of agriculture; (4) chief principles of public and private law.

Both examinations take place before the examiners of the state university. Upon passing the second examination the candidate serves a year in the bureau of forest and cameral administration

of the financial department of the Government, and is then put for another year in the office of a ranger or chief forester. Then comes the examination by the state, which is similar to the second examination at the university, with the addition of a test of the candidate's familiarity with the general laws and regulations of the duchy and Empire regarding the forests, drawing of plans, and execution of a practical problem, especially in the forest, such as surveying, valuation, etc.

After successfully passing the state examination, the candidates receive the title of forest assessors. These have to bring proof of their employment. When they are used as assistants they receive about $1.20 a day; when as rangers, about $1.42. For surveying, etc., they are generally paid according to a fixed tariff. They are promoted to be rangers by appointment of the grand duke. Of rangers there are 71, and of chief foresters 9. These are divided into 5 classes of 16 places, each receiving $1,071, $952, $833, $714, and $595 respectively, the chief foresters belonging only to the first two classes. Besides the sums named, each ranger is allowed for office expenses about $95 a year, and each chief forester about $190. These amounts are granted in the expectation that they will employ persons to do their office work for them so that they can have more time for attending to their proper forest duties. When clerical assistance can not be procured the keepers, with their consent, can be used for the purpose when it does not interfere with their regular duties, and are to be paid extra for this work. Each ranger has to keep a horse, on whose account he is allowed $166 a year for forage.

A chief forester keeps two horses, and is allowed $332 a year for forage. In the case of both rangers and chief foresters, if no horse is kept, traveling expenses equivalent to the amounts for forage are allowed them. Of other allowances, in consideration of the fact that their services are rendered chiefly away from home, each ranger receives about $36 a year; and 18 more important rangers get special allowances, the highest of which amounts to about $47 a year. The chief foresters are paid for all outside services in all the ranges of their forests about $1.42 a day as expenses, and about 71 cents for each night, with $1.42 for each night that a horse is in use. Those rangers and chief foresters who live in dwellings belonging to the state pay about $40 a year as rent.

When the rangers and chief foresters desire land to cultivate, it is granted them at moderate prices. They are not allowed to have wood free, but must pay the full tariff price for it.

Applicants for appointment into the forest service must be strong in body, have good vision and good hearing, have the full use of their hands and arms, and be able to climb mountains and go long distances in every kind of weather.

All members of the forest service wear a uniform when in the performance of their duties.

In case of transfer from one place to another chief foresters, rangers, and keepers who have families are allowed fixed sums as indemnification for general costs and traveling expenses; but nothing is allowed when the change is in consequence of a penalty imposed. Where there is no family the allowance is one-half of that made for families.

Keepers, rangers, and chief foresters are forbidden, under a severe penalty, to have anything to do with the receipt of money for wood or other forest products.

The general instructions applicable to the keepers in regard to good character, accepting presents, dealing in wood, etc., apply also to the rangers and chief forester.

All keepers of the forests and meadows and superintendents of landed property are under the immediate control of the rangers, and each person in the forest service is under the supervision of the next higher. Every person in the forest service is responsible for the acts of those committed to his oversight. Slight offenses are reprimanded by those next in authority; grave ones are reported to the Government. The forest employés are warned, reprimanded, fined, etc. The fine for misdemeanor is usually loss of one month's pay, and for serious offenses reduction in grade or dismissal from the service.

The rangers report, as a general thing, to the chief foresters. In surveying matters, however, the rangers have to report direct to the Government and receive direct instructions; but where delays occur the chief foresters will be called upon to look the matter up, and in all cases the results of surveys will be communicated to them by the Government. The rangers have also to send to the Government at the close of each fiscal year a report of all changes in their forests during the year. In every case the chief foresters are advised of delays and furnished with copies of the rangers' reports.

The chief foresters are not required, in cases where it is their right to pass upon reports of rangers, to lay these reports before the Government before doing so. If the rangers are displeased with the instructions received from the chief foresters, and call for a presentation of the matter to the Government, it must be done; but in pressing cases the chief foresters can insist upon a compliance with their instructions, which must be obeyed by the rangers. Then the chief foresters are to make mention of the circumstances to the Government. Such reports as the chief foresters have no competency to pass upon themselves, they must lay in their original form before the Government. The instructions of the chief foresters form a part of the records of the rangers' offices.

DURATION OF SERVICE.

Those subordinate forest employés whose services are purely of a mechanical nature, such as keepers, and do not require any special scientific training, can be dismissed from the service at any time, when they have been appointed with this understanding and do not give complete satisfaction. If such persons have fulfilled their duties to the satisfaction of their superiors, and become disabled through no fault of their own, they are pensioned. If they have to be pensioned before they have been ten years in the forest service, they receive 40 per cent. of their salary. If longer in the service, 1½ per cent. is added to the 40 for each additional year.

When fifty years are served, 90 per cent. is granted. If a keeper becomes disabled from violence while in the discharge of his duties through no fault of his own, he receives from 60 per cent. to the whole of his salary as a pension. When one dies leaving a family, they receive three months' pay. Those occupying higher positions in the forest service are pensioned like all other officers of the state, with 40 per cent. of the salary when in service less than five years, and from that period up to fifty years with 40 to 100 per cent. of the salary, according to the length of service.

IV.—Revenues from Government Forests, cost of Maintaining Forests, and Profits of Forest Cultivation.

The amounts received from wood and bark from the governmental forests of Hesse in the years 1880–'81, 1881–'82, 1882–'83, 1883–84, and 1884–'85 were as follows:

Years.	For building wood and timber, including bark.		For fire-wood.		Total.	
	Marks.	*Dollars.*	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*
1880–'81	760,911.28	181,096.88	1,390,338.14	330,900.47	2,151,249.42	511,997.35
1881–'82	850,981.45	202,521.68	1,321,210.44	314,448.09	2,172,141.89	516,969.77
1882–'83	926,618.81	220,497.27	1,407,205.28	334,914.86	2,332,824.09	555,212.13
1883–'84	906,066.36	215,643.78	1,472,572.80	350,472.32	2,378,639.16	566,116.10
1884–'85	857,625.86	204,114.96	1,499,526.49	356,887.30	2,357,152.35	561,002.26

The cost of felling and stacking the wood and obtaining and taking care of the bark is given by the Government as follows:

FOR WOOD.

Years.	To fellers and stackers.		For implements.		To support of wood-cutters injured by accident.		Total.	
	Marks.	*Dollars.*	*Marks.*	*Dolls.*	*Marks.*	*Dolls.*	*Marks.*	*Dolls.*
1880–'81	459,162	109,280	1,907	454	912	217	461,981	109,951
1881–'82	468,995	111,621	*3,304	786	798	190	473,098	112,597
1882–'83	445,864	106,115	487	116	588	140	446,939	106,371
1883–'84	478,094	113,786	788	187	996	237	479,878	114,210
1884–'85	477,658	113,683	884	210	†922	148	480,274	114,305

FOR BARK.

Years.	For stripping.		For implements.		For aid to rangers.		For watching bark.		Total.	
	Marks.	*Dolls.*	*Marks.*	*Dolls.*	*Marks.*	*Dolls.*	*Marks.*	*Dolls.*	*Marks.*	*Dolls.*
1880–'81	41,155	9,795	65	15	1,018	242	70	17	42,310	10,069
1881–'82	52,417	12,475	31	7	1,077	257	316	75	53,842	12,814
1882–'83	40,576	9,657	43	10	856	204	517	123	41,992	9,994
1883–'84	47,984	11,420	88	21	1,275	303	382	91	49,729	11,835
1884–'85	36,239	8,625	89	21	1,181	209	390	98	37,850	9,008

* Fellers have, as a rule, to provide their own implements, but in exceptional cases axes, saws, and the like, are furnished by the Government, as, for instance, when it is desired to introduce new and improved tools. The comparatively large amount expended in 1881–'82 for implements was for machines for use in felling, preventive of accidents.

† Then, in addition to this sum, 1,110 marks ($264) was contributed in 1885 to sick fund.

The net receipts of the Government are stated to have been as follows:

Years.	Forest area.	Receipts for wood.		Cost of felling and stacking.		Net receipts.		Net receipt per hectare.	
	*Hectares.**	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*	*Mks.*	*Dols.*
1880–81	65,545.43	2,151,249.42	511,997.36	509,410.68	121,239.74	1,641,838.74	390,757.62	25.05	5.96
1881–82	65,541.04	2,172,141.89	516,969.76	529,397.44	125,972.79	1,642,844.45	390,996.98	25.07	6.01
1882–83	65,508.96	2,332,824.09	555,212.13	489,251.30	116,441.81	1,843,572.79	438,770.32	28.14	6.69
1883–84	65,496.84	2,378,639.16	566,116.12	529,926.97	126,122.61	1,848,712.19	439,993.51	28.23	6.71
1884–85	65,521.05	2,357,152.35	561,002.26	518,170.17	123,324.50	1,838,982.18	437,677.76	28.07	6.68

* Hectare = 2.4711 acres.

The net receipts per cubic meter have been reckoned out as follows:

Years.	Building wood and timber.								
	Product, including bark.	Receipts.		Costs of felling, etc.		Net receipts.			
						Total.		Per cubic meter.	
	Cu. met.	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*
1880-'81	46,536	760,911	181,097	93,244	22,192	667,667	158,904	14.35	3.41
1881-'82	50,952	850,981	202,521	109,688	26,105	741,243	176,416	14.55	3.46
1882-'83	69,966	925,618	220,207	108,427	25,805	817,191	194,491	11.68	2.78
1883-'84	62,334	906,066	215,643	115,470	27,482	790,595	188,161	12.68	3.01
1884-'85	58,064	857,625	204,114	100,333	23,879	757,292	180,235	13.04	3.10

Years.	Fire-wood.								
	Product.	Receipts.		Costs of felling, etc.		Net receipts.			
						Total.		Per cubic meter.	
	Cu. met.	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*
1880-'81	283,498	1,390,596	330,907	419,792	99,910	970,534	230,987	3.42	.81
1881-'82	285,071	1,321,210	314,448	419,980	99,955	901,229	214,493	3.16	.75
1882-'83	260,295	1,407,205	334,915	358,663	85,362	1,048,542	249,553	4.03	.96
1883-'84	282,129	1,472,572	350,472	414,449	98,638	1,058,123	251,834	3.75	.89
1884-'85	283,330	1,499,596	356,887	417,330	99,444	1,081,696	257,443	3.82	.91

Years.	Building and fire wood together.				
	Product.	Net receipts.			
		Total.		Per cubic meter.	
	Cu. met.	*Marks.*	*Dollars.*	*Marks.*	*Dollars.*
1880-'81	330,035	1,641,888	390,757	4.97	1.18
1881-'82	336,023	1,642,844	390,996	4.89	1.16
1882-'83	330,263	1,843,541	438,702	5.58	1.32
1883-'84	344,464	1,848,712	439,995	5.37	1.27
1884-'85	341,395	1,838,992	437,678	5.39	1.28

The costs of culture are said to have been as follows:

Years.	Total amount of forest land.	Natural renewal.*					In full cultivation.				
		Area.	Cost.				Area.	Cost.			
			Total.		Per hectare.			Total.		Per hectare.	
	Hectares.	*Hectares.*	*Marks.*	*Dolls.*	*Marks.*	*Dolls.*	*Hectares.*	*Marks.*	*Dolls.*	*Marks.*	*Dolls.*
1880-'81	65,563	375.29	154.82	36.84	0.56	0.13	343.88	16,279	3,874	47.34	11.26
1881-'82	65,532	302.16	2,375.96	565.47	7.86	1.87	319.42	17,591	4,186	55.07	13.10
1882-'83	65,500	743.66	2,474.27	579.81	3.33	.79	379.81	17,766	4,228	46.77	11.13
1883-'84	65,488	333.72	61.04	14.52	0.18	.04	278.87	13,875	3,302	49.73	11.83
1884-'85	65,519	425.18	1,916.19	456.46	4.51	1.07	199.63	9,777	2,327	48.99	11.66

* Where young plants spring up from the seed that falls from the old trees.

Years.	Improvements.*				Nurseries and seed-beds.		Ditches for closure and drainage.†			Purchase and maintenance of implements.	
	Area.	Cost.					Length.	Cost.			
		Total.		Per hectare.							
	Hectares.	*Mks.*	*Dolls.*	*Mks.*	*Dolls.*	*Mks.*	*Dolls.*	*Meters.*	*Mks.*	*Dolls.*	*Mks.*	*Dolls.*
1880–'81	807.02	35,101	8,354	43.50	10.35	19,577	4,659	83,242	5,725	1,362	290.18	69.06
1881–'82	1,021.43	43,873	10,441	42.95	10.22	28,550	6,794	78,005	5,345	1,272	536.63	127.71
1882–'83	1,516.10	37,920	9,025	25.01	5.95	20,665	4,918	53,059	3,466	825	332.46	79.11
1883–'84	1,306.89	40,797	9,705	31.21	7.42	25,233	6,005	57,399	4,337	1,032	491.15	116.89
1884–'85	1,399.61	41,840	9,958	29.89	7.11	23,054	5,487	35,081	2,732	493	351.66	83.69

Years.	Other expenditures.		Total expenditures.			Material.				Bare tracts.	
			Total.		Per hectare.	Seed.		Trees.		Beginning of the year.	End of the year.
						Foliaceous trees.	Coniferous.	Foliaceous.	Coniferous.		
	Mks.	*Dolls.*	*Mks.*	*Dolls.*	*Mks.* *Dolls.*	*Kilos.*	*Kilos.*	*100 plants.*	*100 plants.*	*Hectares.*	*Hectares.*
1880–'81	7,802	1,857	84,931	20,213	1.30 0.31	47,737	2,725	50,859.44	40,806.85	260.60	249.35
1881–'82	9,597	2,284	107,869	25,673	1.65 .39	43,696	3,126	38,475.2	62,941.85	129.32	122.13
1882–'83	9,143	2,176	91,768	21,840	1.40 .33	39,668	1,688	28,359.28	50,648.3	95.70	87.48
1883–'84	12,388	2,948	97,185	23,130	1.48 .35	85,809	1,799	41,532.82	63,074.35	87.48	82.43
1884–'85	8,709	2,072	88,382	21,035	1.35 .32	64,058	1,650	47,377.7	45,150.5	81.80	66.15

* By this is meant the filling up of gaps where trees are already growing.
† Exclusive of those used as boundary lines or to preserve roadways.

Roads and bridges required the following average outlays per annum during the years 1881 to 1885: For byways, 30,772 marks ($7,323); for preservation of ways and bridges, 64,524 marks ($13,356), or $20,356 a year for both items.

The compensation paid to keepers, rangers, and chief foresters is given in the paragraphs relating to them to be found above.

The net profits of the forests, it is to be observed, can not be given, because the rangers in charge of them have also farm land belonging to the Government and the forests of communes and corporations to attend to, towards whose maintenance the communes and corporations insufficiently contribute. Similar is it with the supervision exercised by the chief foresters and by the forest bureau at Darmstadt. No reimbursement is made for the amounts expended in this way, and the accounts can not be kept separately. It is therefore impossible to say just what the profits are in the Government forests.

V.—Forest Planting and Culture; Methods; Bounties; Schools, their Organization and Course of Study.

The estimates and plans of operations for each year are gotten up annually by the rangers and presented to the chief foresters, who examine them in the course of the summer in the presence of the rangers, to which examination the burgomaster concerned is also invited in the case of communal forests. In like manner are the estimates and plans of the previous year gone over and compared with the results, the latter being indicated in red ink in appropriate places left free for the purpose. Have the chief foresters no objections to

raise they declare themselves satisfied, but if the chief foresters and the rangers disagree as to the course to be pursued the subject is laid before the forest bureau at Darmstadt for decision. It is likewise so in comparing the results of a complete year with the estimates and plans made for it. When a revision of these estimates and plans has taken place a report has to be made to the forest bureau at Darmstadt as to what is proposed to be done the next year for approval, and the projects must be carried out as approved, and no single one left undone or amended without an approval in writing from Darmstadt. It hence follows as a rule that no undertaking is to be commenced until two experts (ordinarily rangers and chief foresters) are agreed as to the same, and have assumed the responsibility therefor. This is considered to be the greatest safeguard that can be raised in the interest of the state in the administration of the governmental and communal forests against the commission of serious blunders.

The forests are kept up partly in the natural way by the fall of seed from the older trees, and young growth, and partly artificially by the sowing of seed and planting of young trees.

The tables showing the costs of forest cultivation during the years 1880–'81 to 1884–'85 set forth the amount of new growth by natural means during these years, as well as the quantity of seed and stock used for repleting the forests. The Hessian Government informs me, in treating of this matter, that the areas devoted to seed and young trees were pretty much the same in each case; that is, as I understand it, as much devoted to seed as to young trees.

The rules or methods of cultivation in the different parts of the duchy are said to be as follows:

PROVINCE OF STARKENBURG.

This province can best be designated as the district lying between the Rhine, Main, and Neckar, by which rivers it is almost completely encircled. The valley of the Rhine forms the western part of the province, to which the valley of the Main is adjoined on the north, while to the east of the former of these valleys, and in a southerly direction from the latter, runs the Odenwald. This Odenwald is a wooded mountain district between Darmstadt and Heidelberg, with a length of about 40 miles and a breadth of from 24 to 30. Its highest points are 1,959, 1,869, 1,834, 1,679, and 1,624 feet high, respectively. More than one-half of Starkenburg is of a flat character, consisting for the most part of a sandy soil, which, towards the Odenwald, seems to be much mixed with the remains of rocks of a primitive and volcanic origin, by which its productive capacity is materially raised. Small scattered tracts of clay, clay-marl, loam, and turf also appear, which are highly fertile. In its most northerly part, in its foreparts, and throughout the valley of the Gesprenz, a small stream, the Odenwald exhibits an exceedingly rich, loamy soil; in its western part, so far as it can be used for agricultural purposes, it possesses chiefly a loamy to clayey soil, while in its entire eastern and southeastern parts a commoner loamy soil of variegated sandstone prevails.

The area of Starkenburg given over to forest cultivation is said to be 42.01 per cent. of the whole area of the province. In proportion to population it is .32 hectares (.79 acres) of forest to each person. For the convenience of consideration, in looking at it from a forest point of view, it is divided into three parts, which I shall take up seriatim.

(1) The valleys on the right bank of the Rhine and the left bank of the Main, commonly known as the valley of the Rhine, the valley of the Main, and the Rhine-Main Valley.

Here we have altogether 53,000 hectares (130,968 acres) of forest land. The country is chiefly of a tertiary formation. The upper strata are composed almost entirely of sand, mingled here and there with masses of stone. Below the sand lies, at shifting depths, an impenetrable layer of earth, upon which the underground water rests; but this water never causes swampy ground, and is therefore considered to be always in motion towards the Rhine and Main. Sometimes, however, in very rainy years, this water appears upon the surface of the ground in the forests quite extensively. The soil is loose, moist, and deep, on the whole, and is therefore excellently adapted to the cultivation of forest trees. But the moist, sandy soil is so favorable to the growth of weeds, in particular to close turf, that young wood has a desperate struggle for existence. Late frosts, too, are of frequent occurrence and very damaging. The close turf has a good deal to do with causing them, as it lowers the temperature by warm exhalations. This has been established by observation. It is often noticed that young stock standing in close turf will be frozen black after a late frost, while similar growth near by, growing free of this turf, will show no sign of injury from frost. In summer, also, the vegetation suffers from dryness in hot seasons. Knowing thus the peculiarities of the soil, the wise foresters plant pines where the dry sand rules, oaks in the moist ground, and alders where the tendency is to marsh, while the sensitive beeches, responsive to the frost's touch, are placed back among the foliaceous trees for protection.

This first part of Starkenburg, of which we are now treating, is subdivided into four others, namely:

(*a*) *High dry situations.*

In these, pines render excellent returns. At present there are about 33,000 hectares (81,546 acres) of them. They, however, do not do so well as in North Germany or Upper Hesse. The present stock of trees is partly of pure natural growth and partly produced by the sowing of seeds, planting of trees, etc. The young trees which spring up in a natural way need a good deal of attention and help, as they develop unequally. The best success is met with in the planting of yearlings. The ill luck encountered in North Germany in planting pines one year old, especially the abnormal formation of the roots of the trees twisting up and pressing against one another, is said to be due not to the planting of the trees at this age, but to the manner in which it is done. To insure these young trees a good growth on being transplanted when they are a year old, three conditions, it is claimed, must be observed; there must be good material to plant, good soil in which to place, and careful setting of the trees in the ground. By good material are by no means the strong saplings to be understood, with top roots 30 centimeters long, looking like maiden hair, but those with heads the size of a walnut and perpendicular roots 10 to 12 centimeters long, with short growths of stiff, bristle-like side roots. The stronger and greater the growth the more difficult is it to set the roots properly in the ground. Saplings should, therefore, not be raised in strong soil of light character to a great depth. The soil where they are to be cultivated should be plowed

up a foot in depth, and the roots placed in the right position. The nurslings are to be planted pretty thick together, 30 centimeters apart in rows, the distance between the rows at the utmost 1.25 meters, in order to provide against too strong a growth of limbs.

If the planting of yearlings is done in this wise, and they be carefully protected from the air while being transported from their cosy beds to their new places of abode with moss or humid earth, there will be success in their rearing. On strong soil, where the grass grows freely, it is thought advisable to plant pines on completely worked land in rows with potatoes for one to three years, and on poor soil on strips plowed up for 25 centimeters wide and the same distance in depth, which shall be 125 centimeters apart.

The cultivation of red beeches under pines is done more and more. If it is done early the beech, even upon ground of poor quality, does not refuse to grow. Under the leaves thrown off by the beeches the moss on the ground disappears and gives place to a covering of leaves, conserving moisture, the danger from fire and insects is lessened, and the forester gets stronger pine to fell.

Wherever young growth is springing up for renewal of the forest there should be a corresponding number of old trees equally distributed over the places where there has been felling.

(*b*) *Localities of fresh soil.*

Here, up to the beginning of the present century, grew chiefly the lordly oak, on extensive forest tracts, at the same time given over to pasture, upon which large droves of cattle and splendid herds of swine were driven, to pasture and gather up the fattening acorns. Pasturage was the chief object had in view, while the growth of forests was of secondary consideration. Little wood required a small population, and little was taken. Changes in the mode of farming made pasturage in forests dispensable; the new age, brought with it large demands for wood; particularly did the clamorous locomotive, snorting its way through the cherished possessions of the past, call loudly for the old oak's fall, and rapidly succumbed this ancient denizen of the forest, until little was left of the rich old oak forests of the past; and so is it still. When the monarch was almost wholly gone, men sought to restore him, but with little success. The acorns spring readily into little trees and give tokens of a rich growth, but the saplings cannot long endure the shade of the parent trees, and they must be liberally trimmed that the young growth may receive light and air, but the more they are torn asunder to give entrance to the vivifying light, the more grow the rank things of nature, and combat vigorously with the tender young oaks for existence. Then comes the fateful late frost as a sort of confederate to the noxious in nature, and together they make rueful work.

The grove soon makes a sorrowful appearance. Here and there small bodies of trees are to be seen, while wide tracts of bare ground show where many more were and are not. Such is the result which meets the attempt to rebuild old oak forests by natural means. The best way to save groves of young oaks ruined by the frost is said to be by clearing out the old trees and plentifully planting pines among them. The long-striding pine soon protects the young oaks from the frost, and destroys the baneful grass, while their scraggy tops permit the light to stream through in sufficient measure to nourish the young oaks, which soon give evidence of the beneficial effects of the

new companionship. Long and sad experience has taught the foresters of Hesse that the pine is indispensable in the cultivation of oak in their land. They are most effective when seasonably planted and put uniformly, and not too far apart, among the oaks.

More satisfactory than the renewal of oak forest by natural means is what is known as the kahlhiebsbetrieb (the ground after being bared of trees being resown or replanted.) In this way only can all the conditions be given which the nature of the oak requires. The oak is thereby forced to send long and strong roots deep into the earth, and the soil is deeply worked with this object in view. The oak requires for years a space free of all weeds, etc., and a good share of moisture, and a soft soil kept well cleared of weeds is therefore very necessary. It sucks in the air's moisture and the dew more readily than hard ground, and keeps life in the young trees. To keep tracts of land devoted to tree culture free from all noxious growth for years is expensive, and it is therefore recommended that agricultural products be grown between the rows of trees, in whose cultivation the grass, etc., will be kept down, and a return be received for the labor expended.

Of great importance is the determination of the question whether the oak ought to be sown or planted. For various reasons the sowing of the seed should be preferred to planting. To thrive well the oak must have perpendicular roots of good strength sown in the moist underground, to serve as a support for the high, spare trunk which shoots up.

This condition can not very well be provided in the case of planting. Seed, too, has another advantage, that it can be made to spring up in rows and at whatever distance apart is desired, so that the young trees can be made to protect one another and their branches be directed outwards, thus destroying the growth of grass on both sides. But whether seed is sown or planting done, the oak should never be cultivated alone, but in conjunction with the pine upon loose soil, free from all rank growth; pines one year old should be preferred to everything else. It is doubtful in what degree the pine should be intermingled with the oak, but it is thought the pine will fulfill its end when cultivated in alternate rows with the oak, thus affording the latter protection on both sides. If the rows run from east to west the protection is relatively the greatest, because the compact pines in the early part of the year will guard the oaks from the sun and retard their vegetation, and the rows thus disposed grant access to the cool east wind. The latter is quite an important point to be considered, as frosts of late occurrence are said to form chiefly when this wind blows and to be least observed where it has free play.

Very useful to the oak can the pine be in its infantile years, but very damaging later on. Fast grows the pine in Hesse, and in time suffocates the oak if not checked, particularly where growing in irregularly among the oaks and not in rows. So soon as the tops of the pines come together they must be carefully thinned, but not too liberally lopped off, as the oak still is in need of protection from its lank companion. It is only light that must be procured for the oaks at first, but as they grow in size and increase in strength the pines can be gradually removed altogether.

Where an oak grove has been decimated by frost it is said that it is not well to cut down the plants that have been injured, as the office of freeing itself of its stricken members will be cheapest and best performed by the oak itself, for so soon as the protective pines are in-

troduced the young oaks send out a new growth, which will, as a rule, be a single shoot which will rapidly grow, while if they are cut down a number of shoots will break out, and the strength of the little trunk be impaired.

As soon as light is provided an undergrowth must be provided for, for which the red beech is generally best adapted; but for a soil moist to a considerable depth the yoke-elm is preferred, or something of the kind. This undergrowth is best produced by planting, as the young shoots springing from seed are too sensitive to frost. After this planting of undergrowth is accomplished what remains of oak should be frequently thinned, that the young oaks may be excited by the entrance of plenty of light to strong growth and the trees under them be likewise benefited; but great care is to be exercised in this thinning-out process so long as the oaks have not finished their top-growth, lest they be made to expend their force in breadth, by throwing out strong limbs and double tops.

In the valley of the Main and the Rhine the oak at present occupies only some 8,700 hectars (21,498 acres) of forest land, while it is certain that it could and ought to embrace a much larger area, and in past times did undoubtedly do so. The pine, with the help of man, has pressed the oak into the background, because thought easier to raise, and presumably more profitable; but experience, where they have been grown side by side, says that it is a false assumption.

Where it is possible, the oak should be grown alone, and when grown side by side with other trees the pine should be its companion in dry situations and the ash in moist. The beech does not answer, because it is more sensitive to the frost than the oak, and its wood less valuable, but makes a good undergrowth after oaks and pines have got a good start.

(*c*) *Situations of a wet or marshy character.*

Here and there are to be found spacious but mostly not very extensive patches of turfy, marshy ground, from which the humidity hardly ever entirely disappears, even in the height of summer. On such land the black alder is principally used, mixed, more or less, with ashes and oaks. Their seed is sown in the fall of the year upon hot-beds, which are securely closed, and seasonably covered early in the spring with brushwood. Then they are afterward set in the ground where desired. When the pieces of marshy ground in oak forests are not of sufficient size to form subdivisions it is advisable to grow alders with the oaks. The alders up to their sixtieth year will give very valuable returns, while the oaks from then on will form stronger tops. It is also recommended that the alders, because of their service to the oaks as a protector, be not confined to the marshy ground, but extended to the less wet soil. The part of nurse or guardian which the pine performs for the oak on dry ground is rendered by the alder on wet.

(*d*) *The tracts exposed to flooding from the rivers.*

There are about 500 hectares (1,235 acres) of this. Here the high wood consists of oaks, ashes, alders, poplars, and wild-apple trees, beneath which grows a thick, impenetrable mass of bushes of various kinds, with every open space filled with a luxuriant growth of weeds and grasses. The wood grows splendidly, and the oaks give a mag-

nificent yield of acorns for seed, in some years so plentifully that the requirements of all the governmental forests can be supplied.

(2) That part of the Odenwald, of a primitive rock formation, the so-called Bergstrasse.

This comprehends that part of the Odenwald which lies pretty nearly northwest of a line drawn from Heidelberg to Aschaffenberg, and fills up the triangular space lying between the towns of Darmstadt, Heidelberg, and Aschaffenberg. Syenite and white-stone are the chief stones. Of granite there is less. Gneiss prevails in the east. The rocks on the surface of the ground have almost all decayed under the action of the weather. Only a few sterile, stony patches remain. The soil is productive, the climate mild, and forest trees grow luxuriantly up to the summits of the mountains, the highest peaks of which are the Neunkircher Höhe, 1,935 feet high; the Tromm, 1,817 feet, and the Felsberg and Melibocus, 1,707 feet high.

All kinds of wood thrive here. The beech has all along predominated, but must give place more to timber-producing trees. Where the soil and situation permit of it different kinds of trees will be cultivated together; in the vales with fine fertile soil the oak with the red beech as an undergrowth, on the hills with fine deep soil the larch with the silver fir underneath, in places with a good and deep but dry soil the pine with the beech below. Where the soil does not favor long-trunked trees purely there should be forests of mixed character, it is said. Oaks, ashes, maples, alders, chestnuts, larches, firs, and pines should be mixed, according to requirements, with red beeches obtained by natural springing up, and the foliaceous trees should always get a good start of the coniferous. Where the land is free of stone agricultural products can be cultivated among the trees.

On steep slopes care is directed to be taken to catch the hurrying water in horizontal gulleys and divert it into dry parts, and thus get it evenly distributed, as far as possible, over the whole surface of the ground.

Adjoined to that part of the Odenwald we have just been considering is a tongue of mountainous land, lying eastward of Darmstadt, about 10 kilograms long and 30 wide, belonging to the dyas formation. There is about 5,000 hectares (12,355 acres) of it. The soil is principally a fertile, moist, heavy loam, upon which all the kinds of wood just considered grow well, and which is to be cultivated like the land last treated of.

(3) That part of the Odenwald belonging to the colored sandstone region.

The southerly and easterly part of the Odenwald, lying between a line drawn from Heidelberg to Aschaffenberg and the duchy's frontier, is here meant, embracing about 42,000 hectares (107,786 acres) of forest land. The climate is not so mild as the Bergstrasse, which we considered under No. 2, but is temperate, and the soil is far less productive.

The southern declivities of the mountains present excellent fields for the cultivation of the oak for bark. The quality of the bark obtained here from trees allowed to grow for thirteen to sixteen years is said to be unexcelled. They are trying now to raise a tree which in the best localities, upon fifteen years' growth, will give up to 8,000 kilograms (17,600 pounds) of bark a hectare (2½ acres). When the bark and wood have been removed the saplings, etc., are burnt with fire and their ashes hoed into the soil, and the ground between the

old stumps planted with winter grain or buckwheat. This sort of thing is regarded as objectionable, but it has the force of ancient custom and is done on a large scale. Nevertheless it is thought it will be gradually given up in time.

Where forests of this kind get run down they can be improved by the introduction of pines. The pines are cultivated by sowing their seed in furrows or by planting yearlings. They are allowed to stand until the heath has disappeared and the soil has become better, when they are hewed down with the felling of the cropped oaks.

The northern declivities, as well as the higher and rawer situations in this district, are used for high trees. Upon the northerly slopes, and in the cooler localities, the red beech is largely grown; in the drier and southerly parts principally pines, but also oaks and firs. The forests in this district are chiefly in the hands of private individuals, the State possessing only 5 per cent. of the whole. It were much better, it is said, if they belonged to a greater degree to the state.

PROVINCE OF RHINE-HESSE.

This province is poor in forests. Only 4.66 per cent. of the whole area is devoted to forest cultivation, or only 0.02 hectares (0.04 acres) to each person of the population. This is the most fertile of the three provinces of the duchy, and the smallest in size, comprising about 533 square miles (English), while Starkenburg has about 1,171 and Upper Hesse about 1,275. It is of a hilly nature, and is bounded on the north and east by the Rhine.

PROVINCE OF UPPER HESSE.

Of the whole area of this province 32.50 per cent. is given over to the cultivation of forest trees, or 0.40 hectares (0.98 acres) per capita of the population. It lies north of the Main and is a difficult region to describe physically. It is situated high above the sea, and has no large plains. It is in part of an undulating character, and partly of a rough, unfertile, mountainous nature. The eastern and western divisions of the province are wholly unlike the soil of the western portion being very fertile, while that of the eastern is very poor. For convenience of consideration we will divide it into—

(1) *The basalt section.*

The Vogelsberg Mountains, the most important basalt group in Europe, rise in the eastern part of the province of Upper Hesse into an elevated plateau about 9 miles long and 5½ miles broad and up to 2,536 feet above the level of the sea, from which pretty radial, wide, flattened spurs jut out, with fertile valleys inclosed between them. The dark soil produced by the decayed basalt is very strong, but heavy and cold. The chief range is incompletely covered with forest trees. Its southern half lies bare of trees. Also on the fore mountains numerous tracts bear only short grass and wild bushes, and where there are such parcels of some extent they give the landscape a desolate, dreary appearance. Were they cultivated with forest trees a beneficial effect would be exerted upon climate and inhabitants.

This basalt district is divided into two regions:

(*a*) *The high situations.*

Where the climate is raw and moist, and where the number of rainy and foggy days exceed those upon which no moisture falls, the beech is at present the prevailing species of tree grown, to which the mountain maple is associated. Where the beech does not spring up well spontaneously, the fir is introduced. Such insertions of firs are said to often comprise many acres of land. In the forests in the higher regions the humidity of the climate gives the vegetation a peculiar look, with branches scarred by the vapor and ice and covered with lichens.

The spontaneous growth of beeches is surrounded with difficulty. Years yielding mast are rare, as the seed does not fully ripen in the cool summers, and the half-molded layers of leaves do not allow the sapling to strike its roots down into the mineral soil, while upon tracts where the light dwells raspberry bushes, ferns, and grasses claim the soil and choke out the weaker beeches, maples, and firs. The mountain maple seems to do the best.

Next in importance comes the pine, but experiments so far made with the fir have secured for it the favor of the cultivator only in a moderate degree, as it suffers so from the effects of ice and vapor that few specimens of it fifty years old are to be met with whose tops still serenely rear their lofty heads, but it is said that they are nevertheless more profitable than beeches, and it is thought they are raised too thick together. Where there are gaps between young maples and young firs they should be closed up, it is said, with beeches, by sowing the seed or planting.

Experience has taught that in this region firs when forty years old should be exchanged for beeches, whose seed is to be sown under them, as the beech can thrive in this moist climate with a closed roof of firs above it.

(*b*) *The fore mountains.*

Of this there are about 54,000 hectares (133,439 acres). In this region the beech is decidedly the prevailing kind of tree, and between the beech forests detachments of pines start up, as well as clusters of firs. Parcels of oaks are to be met with, but are on the whole of slight extent, of which the same may be said of larches, ashes, alders, maples; white firs and elms are still less grown, but the yoke-elm appears in the deeper and moister situations, while the birch and the aspen show themselves in all tracts.

The beech has grown here since ancient times, the mistress of the forest, and thrives much better than any other kind of tree. Attempts in recent times have been made to introduce other trees, such as oaks, ashes, and maples, among the beeches, but mostly in vain, and more success was met with in the case of firs, pines, and larches. It is recommended, however, that forests of mixed trees be striven for.

(2) *The district of colored sandstone surrounding the basalt region on the north, south, and east.*

The basaltic region is enriched in the northern, southern, and eastern part of the province of Upper Hesse by one composed of colored sandstone. This latter takes in about 23,000 hectares (56,835 acres). Here the pine is the leading kind of wood. On the moist mountain

sides grow pretty good forests of oaks. Pines are now more and more grown by the transplanting of yearlings. Formerly it was chiefly done with seed.

(3) *The lowlands at the foot of the Vogelsberg.*

Around the basaltic branches of the Vogelsberg there lies a band of clayey, loamy, chalky, and sandy deposits of Tertiary and Devonian character, embracing about 10,000 hectares (25,000 acres) of forest trees. The soil being varied in quality, in consequence of differences in the nature of the deposits, the vegetation is various. While in one locality beeches growing on a loamy soil are perhaps the most flourishing and best developed the duchy anywhere has to present, in another, where the soil is a cold, plastic clay, a sorry growth is beheld. In the dry sand and gravel the pine is held here to be the fittest tree; in moist soil, the oak; with beeches for an undergrowth in each case. On loamy soil a mixed forest, with beeches for a basis, is thought best, and a good insertion of oaks. Where the ground is clayey no tree does well, but the most satisfaction is got out of the oak, mixed in its youth with the alder, which then serves the oak as a guard.

(4) *That part of the Taunus Mountains belonging to Upper Hesse.*

On the eastern side of the Taunus range lie about 9,000 hectares (22,000 acres) of forest trees. The country is Devonian in character principally, geologically considered, and the soil varied in quality.

In those forests where trees are grown for bark they are allowed to grow for eighteen to twenty-four years, and several years before the forests are completely cleared they are liberally thinned out, which is said not only to greatly improve the quality of the bark on the remaining trees but to considerably increase their growth in new wood. High prices paid in past times for bark led to a great deal of land being devoted to the cultivation of cropped trees for bark, upon which present low prices are exerting an unfavorable influence.

In the regular forests is a mixture of trees preferred, with the oak predominating in moist situations and the larch and pine in the dry.

CLIMATE.

The Rhine-Main Valley in Starkenburg is, in general, to be described as a strip of land with a mild south German climate, which, in consequence of the influence of the Odenwald, the rivers Rhine and Main, and the great number of its forest trees, is very much subject to storms and fogs. That part of the plain which is free of forest trees, lying between the Rhine and the Bergstrasse, suffers from dryness in summer because the vapors and storms, after passing the Rhine, rush with precipitation to Bergstrasse. The Odenwald has, with few exceptions, a very nice, mild, mountain climate. In its western part, known as the Bergstrasse, the grape and almond flourish. Upper Hesse has a more northerly climate and the Vogelsberg is raw. Rhine Hesse, poor in water and almost devoid of forest trees, is a warm vineland, whose soil and atmosphere become very warm in summer during the day and cool off quickly at night. Certain heights and plateaus suffer from wind. Meteorological observations made by certain gentlemen at six different places in Hesse during the

years 1866 to 1879—that is for fourteen years—showed the following average results:

The highest average temperature was at Darmstadt, in Starkenburg, + 8.005° Réaumur for the year, + 1.31° in winter, + 7.79° in spring, + 15° in summer, and + 7.92° in autumn, and the lowest at Giessen, in Upper Hesse, + 6.840° Réaumur for the year, + 0.28° in winter, + 6.62° in spring, + 13.50° in summer, and + 6.88° in autumn. The largest average amount of rainfall per annum was at Michelstadt, in Starkenburg, 84.75 cubic centimeters for the year, 17.80 cubic centimeters in winter, 18.84 in spring, 25.82 in summer, and 22.29 in autumn, and the lowest at Pfeddersheim, in Rhine-Hesse, 48.58 cubic centimeters for the year, 9.62 cubic centimeters in winter, 9.88 in spring, 17.83 in summer, and 11.25 in autumn. The largest number of rainy days on the average was at Darmstadt, 181.04 per annum, 39.40 in winter, 47.14 in spring, 49.01 in summer, 45.50 in autumn, and the smallest number at Monsheim, in Rhine-Hesse, 137.93 per annum, 27.80 in winter, 35.43 in spring, 39.70 in summer, and 35 in autumn. The largest number of days on which snow fell was at Giessen, 27.28 for the year, 18 in winter, 6.08 in spring, none in summer, and 3.80 in autumn; the smallest number at Monsheim, 19.53 for the year, 11.70 in winter, 4.90 in spring, none in summer, and 2.93 in autumn. State of the barometer, direction of wind, and relative moisture of the air were observed only at Darmstadt.

BOUNTIES.

None were granted, the government of the duchy informs me.

SCHOOLS, THEIR ORGANIZATION AND COURSES OF STUDY.

The study of forest culture is chiefly done at the State University at Giessen, but attendance is also permitted at other educational establishments. The manner in which organized and the courses of study pursued have not been made known to me.

The branches of knowledge with which the forest officials have to be acquainted is set forth under III—Organization and functions of Government forest bureaus.

EXPERIMENTAL FORESTRY.

There is an institute for experimental forestry, the provisions of law affecting which, passed in 1882, are as follows:

The object of the establishment of this institution is the furtherance of forest culture and the obtainment of exact knowledge for the cultivation of forest trees in Hesse according to local requirements and climatic conditions. The means to this end are the making of investigations of a theoretical and practical nature, and a comparison of them with one another, as well as with results met with elsewhere. The institute forms an integral part of the imperial combination of such establishments in Germany, and works in connection with them.* The institute is adjoined to the forest institute belonging to the university at Giessen. The scientific experiments are under the direction of the two professors of forestry at this university. The experiments and investigations take place in and about Giessen as the seat

*The different states have such institutions, which now work in common.

of the directors thereof, and partly in the leading forest districts of the duchy. They are given an assistant and the co-operation of the forest officials.

VI.—Destruction of Forests.

Causes and results.

The destruction of forests is chiefly brought about by fires. The extent to which this occurs in Hesse is slight, and it seems that during the years 1881 to 1885, both inclusive, there were 272 fires in the woods of the duchy, causing a total damage to the forests of but 10,055 marks ($2,392).

Of other causes of consequence there have been none for a long time.

Bared tracts are put under cultivation as soon as possible.

VII.—Reclamation of Sand Dunes or Waste Places by Tree Planting.

There are no sand dunes unoccupied by wood or waste places of any consequence.

VIII.—Sources of Lumber Supply—Trade in Lumber, etc.

The tables under IV (revenues from Government forests) set forth all the information I have on this subject. A part of this wood is exported, particularly in the cases of beeches and coniferous trees; and on the other hand there is much floated timber imported, the importation exceeding the exportation, on the whole.

IX.

The Hessian Government names the firms of Appel, Lecoq & Keller, of Darmstadt, as reliable dealers in seeds. Of dealers in saplings there are none in the duchy, as the foresters produce all that their needs require.

FINES AND PENALTIES.

The value of all forest objects is fixed by governmental tariffs, according to which fines and penalties are imposed. If the value of the purloined or damaged object is not contained in these tariffs it is estimated by the forest officials. Parents and guardians are responsible for the acts of their minor children and wards, as are all others who have minors under their charge and in their keeping; employers for their employés and apprentices, if the misdemeanor has inured to their benefit; buyers of wood for the acts of those employed by them to fell or prepare wood, so far as these persons are not regular forest woodmen; and communes and individuals for the act of their herdsmen while in their service; but in the three last-mentioned cases the accusation must be brought within four days after the discovery of the misdemeanor. Whoever forces children or others under his authority to commit trespasses in the forests is punishable with imprisonment, or by fine up to $35. The lowest fine imposed for a trespass or misdemeanor in the forests amounts to 7½ cents.

The penalty imposable for a forest misdemeanor is doubled when the act is committed at night or on a Sunday or Church holiday, or on a day when the forest court of the district is held; when the accused, regardless of the admonition of a forester, has persisted in the act; when the case is one of repeated commissions of trespass on pasture or grass land, or of stealing in the forest (the taking of dry brush-wood being excepted) in any one twenty-four hours; when the stolen things have been sold or otherwise disposed of; when a saw is made use of in obtaining wood; when the culprit has been once before imprisoned for a similar offense; when the author has sought by blacking his face or disguising himself to escape detection; if the accused, on being discovered in the trespass, gives a false name or place of residence, or refuses to state either by keeping silent, the penalty fixed by the tariff and one-half as much again is imposed; so it is also for stealing wood or committing a pasture or a grass trespass, if he has been convicted of a like act at either one of the two immediately preceding forest courts, or has used stolen wood in the trade he follows. An additional penalty amounting to one-fourth of the regular penalty is added to it when the accused, on being seen by a forester committing a trespass, does not stand still when called to by the latter, but rather flees away or gets the better of the forester without having done him any injury by word or deed; when the accused, at the time the misdemeanor or trespass was committed, was employed in the forests in some capacity, as a wood cutter, etc. Whenever several of these provisions are applicable to one case the penalty provided for in each is imposed, with this restriction, that the sum of the penalties shall never exceed four times the amount of the simple penalty fixed for a like transgression. Persons convicted of forest offenses pay the fines fixed for their cases, costs, and damages, and moreover a forfeit, which is set at from 5 to 90 cents.

Whoever, without authority, takes dry standing wood, stump-wood that has been grubbed around, thin boards or chips, brush-wood or limbs of trees lying on the ground, when the same have not been prepared for sale or use, is made as a rule to pay double its value as a penalty, but only its actual value when no tool, wheelbarrow, or vehicle has been employed in its abstraction. Whoever, without right, takes off a green trunk or sapling is made to pay thirty times its value as a penalty when it measures $1\frac{1}{2}$ inches in diameter in its lower parts; twenty-five times its value when it measures from $1\frac{1}{2}$ to $3\frac{1}{2}$ inches; twenty times its value when it measures from $3\frac{1}{2}$ to $4\frac{1}{2}$ inches; fifteen times its value when it measures from $4\frac{1}{2}$ to $6\frac{1}{5}$ inches; ten times its value when it measures from $7\frac{4}{5}$ to $9\frac{2}{5}$ inches; and four times its value when it measures $9\frac{2}{5}$ inches or more. For taking green wood from a nursery, or green wood which has been planted, an additional penalty of $2.15 is added to the foregoing. For taking posts or wood fencing off a piece of ground the penalty is five times the value of the abstracted wood, with $2.15 in addition, and the cost of replacing the stolen objects. All other abstractions of wood not mentioned in this paragraph are atoned for by the payment of a penalty equal to three times the value of the purloined objects.

For bark already peeled off which the accused has appropriated to himself, or which he has torn off from lying wood, or for charcoal or ashes which have been stolen, the penalty that is imposed amounts to five times the value of the appropriated article. Where

the bark is stripped from growing wood, twenty times its value is exacted. In addition to all these penalties the courts are empowered to add fourteen days in jail in the cases of habitual trespassers, and these habitual trespassers can even get three to four weeks in jail. Stealing is defined to be the putting of wood, which has been lying on the ground, upon a wheelbarrow or other vehicle, upon one's back or shoulder, with thievish intention, or the taking of it in any other manner from its place of rest with similar intent; or the felling of green wood for the purpose of unlawfully carrying it off. Similar is the definition applied to the abstraction of other forest products. If a tree is so injured by a trespass that it dies, or becomes seriously checked in growth in consequence of it, the penalty is imposed for the whole tree. If the stolen thing has been so used that its exact size cannot be ascertained by exact measurement the size is estimated. A person who knowingly buys or accepts products stolen from the forest makes himself *particeps criminis*.

The penalty for stealing the seed of forest trees, or useful bushes, is fixed at three times the value of the seed taken, which is made six times the value of the seed when it is obtained from inclosed ground, or from tracts where seed is growing, or fellings taking place—that is, in the case of oaks and beaches. For improperly taking wild fruit about 45 cents a basket is imposed as a fine, and for stealing cultivated fruit about $2.15 for the same quantity.

The unauthorized pasturing upon uninclosed ground of cattle, swine, horses, asses, or goats, is punished by a fine of 15 cents a head, and for a similar offense with respect to sheep the fine is 7½ cents a head; but the total amount of the fines levied is not to exceed $4.25 in any one case. This is increased twofold when the trespassing is upon an old inclosure, or is done with swine at the time the acorns are falling; and threefold when it is done in a recent inclosure, or on a tract where seed is springing up and there is a young growth, or where there is a felling; but in the first instance, a compound fine is not to go beyond $8.50, and in the second not to overreach $12.15. If the trespassing is done by cattle astray only the actual damage done has to be made good. The exercise of vested rights at improper seasons of the year, and the exceeding of one's privileges in any particular, are regarded as trespasses.

For taking grass from uninclosed ground the fine is 15 cents for each bundle that can be carried on the back or shoulders. For doing the same thing on inclosed parcels the fines for the same quantity are 30 cents when the grass is torn up; the same amount when cut in an old inclosure with a sickle, scythe, or like instrument; 45 cents when done in this way in a new inclosure, and 70 cents when committed in the same manner in a nursery, or where there is young growth or a clearing.

The fine for pulling leaves and other growth from growing foliaceous and coniferous trees is 30 cents a burden. For taking dry leaves, dry cones, moss, broom, and other litter of the kind on uninclosed tracts the fine is 10 cents a burden. Getting litter on forbidden land is punished per burden by a fine of 20 cents when no tool is used, and when a rake, sickle, spade, hoe, or something of the kind is employed the fine is 30 cents in old inclosures and 50 cents in new ones, and where there is a nursery, or young growth, or a clearing.

For carrying off stone, turf, gravel, loam, or other soil, except mold and sods, the fine is 7½ cents for what can be carried on the

person, 15 cents for what a wheelbarrow holds, 30 cents for what is contained in a two-wheeled vehicle, and 60 cents for what is in a four-wheeled one, with the fine one and a half times as great when the trespass is committed in inclosed ground where there are trees more than forty years old, and twice as much when it occurs among younger trees. Whoever without authority takes earth, stone, or sods from public or private ways or on land belonging to others, digs up earth, loam, sand, gravel, or marl, or cuts out turf or peat, sodding, or stones, the right to do which does not require a concession or permission from official authority, can be fined up to $35 or punished with imprisonment. And the law of Hesse prescribes the same penalty for the obstruction of all similar objects. For unlawfully procuring mold or sods from the surface of forest ground the fine is the same as in the case of litter. The stealing of cut stone is treated as common thieving.

The stealing of rosin, cones, or the juice of the birch or maple from the trees is accompanied by a fine of 45 cents for each tree injured, provided no permanent injury is done. Whoever destroys wood lying on the ground or wood still standing, but in a dry state, or so injures it that its value is diminished, has to pay a fine equal to the value of the injury. Whoever intentionally injures trees, stones, or other objects marking boundaries has to make the thing good and pay $4.25 as a fine. When it is shown to have happened accidentally, the thing injured has to be restored and $2.15 paid as a fine. In the case of injuring hedges, or other things inclosing grounds, signboards, and the like, what is injured has to be restored, and a fine of $4.15 paid when done intentionally, or 45 cents when accidentally. For going unlawfully on strange forest ground and digging or plowing up the same, or making use of it in a similar manner as though one's own possession, the fine runs from 85 cents to $17.15. If, in addition, any structure or building is put up, $2.15 is added to this fine.

The authors of forest fires are turned over to the courts of law for punishment.

Workmen employed in the forests are fined as follows for negligence or misdemeanor while at their work:

For felling the wrong wood, one-half of its value.

For failing to fell wood designated, the loss of wages for the felling;

For improperly felling or cutting wood with an ax instead of sawing it with a saw, 22½ cents for each trunk and 7½ cents for each log;

For felling a tree in such a way that it injures valuable undergrowth or side growth, 22½ cents;

For neglecting to dig out wood, when prescribed, whose lower parts could be used for building timber or in the arts, 22½ cents for each trunk, and for the same offense in respect to fire-wood 7½ cents for each trunk;

For not properly sawing off wood close to the roots and for making logs too long, 22½ cents for each trunk, and for doing the latter in the case of fire-wood 7½ cents for each trunk;

In forests of topped growth, for splitting a trunk, or not cleanly cutting it off, or in taking bark from the trees, not properly doing it, 5 cents for each tree;

For not sowing seed or making plantings evenly or according to agreement, 5 cents for each spot;

For converting wood of the oak, maple, ash, or elm, that could be used for building timber or in the useful arts, into fire-wood, the value of the wood, and the same rule applies to other kinds of wood when converted into fire-wood contrary to directions;

For cutting off logs, sticks, or faggots, contrary to directions, into improper lengths, or improperly splitting logs, or binding too few or too many faggots together, or converting logs into sticks, or sticks into faggots, in an unauthorized manner, 2½ cents for each piece or stick;

For not assorting building wood according to directions, 2½ cents for each piece;

For not carrying wood to the places designated, 7½ cents for each solid cubic meter or every fifty faggots, and ¾ cents for each piece of building wood;

For not providing wood with supports when put on places where there is vegetation, 5 cents for each cubic meter;

For reversing the length and breadth in piling wood, or heighth and breadth, 7½ cents for each layer;

For improperly piling up or placing wood in layers contrary to directions, twice the amount of the difference in worth;

For giving piles of wood different surface dimensions to those specified, three times the value of the difference in worth;

For using logs for meter supports contrary to instructions or when not absolutely necessary, 5 cents for each support;

For neglecting to cleanly do a felling or piece of work, the cost of the unfinished work;

For every other violation of instructions of the forest officials not above provided for, 7½ cents.

In all the above cases if the act committed or omitted admits of rectification or amendment the offender has to pay for the doing of it, if he does not make the rectification or amendment himself.

The charcoal burners, when they erect their charcoal kilns on the wrong spots, are fined $1.30. When they procure leaves, grass, and the like, from unauthorized places, to put over their kilns, they are fined at least 45 cents, when it is not regarded as an actual theft.

He who leaves standing the wood he was told was for him and takes wood of the same character belonging to another instead of it, has to pay as a fine a sum equal to one-third of the value of the wood carried off by him, if he can not show that it occurred solely through an error.

The penalty for lighting a fire at a dangerous place in the forests runs up to $15, or fourteen days in jail. If a fire, started with or without the permission of the forest officials, is left burning the fine for it is 45 cents, but $1.75 if the fire was among trees less than forty years old. Charcoal burners who do not remove all foliage, heath, moss, or other combustible material from within four steps of their kilns, or do not keep good watch over the kilns day and night when burning or have others do so, or do not always have a barrel of water at hand to put out fire, are fined 87½ cents; and when through their fault their kilns break out into flames, they are fined $2.15. Charcoal burners who knowingly convert into charcoal wood that has been stolen have to pay 30 cents for each cubic meter so used. Charcoal burners who permit wagoners to carry from the forests charcoal in which the fire has not been completely extinguished are fined 52½ cents, and wagoners who do not have a vessel ready on each wagon for putting out fire are fined 32½ cents a wagon.

For loading a wagon with wood on improper days, or before the customary formalities have been gone through with, the fine is 15 cents a burden or 45 cents a load.

For taking away side products of the forest in a vehicle when only allowed to be carried away, the fine is 45 cents a load.

When wood is not taken away by the time fixed a fine of 22½ cents a load is levied, and the wood can be got off and sold at the cost and risk of the delinquent; but the party interested must have previous knowledge of what follows delay.

Persons to whom loose wood is granted, or to whom out of special considerations building wood is given gratis or for a slight price, are not allowed to sell the same or make charcoal of it without permission of the forest officials, and if they do, are made to pay, as a penalty, a sum equal to the value of the wood disposed of. And so is it if for any particular purpose a person receives wood free of charge or for a slight sum of money and he devotes it to another use, for which he could not have got the wood.

For riding on a forbidden road, except in cases of special necessity, the fine is 15 cents; and for driving there 15 cents for each wheel to the vehicle; and for dragging a sled the fine is 7½ cents for each human being aiding in the dragging, and 15 cents for each animal engaged at it. Similar are the fines for going out of a free or forbidden road. These fines are doubled when the road is departed from if a protected tract of trees less than twenty years old is ridden or driven into.

Whoever without authority walks, drives, or rides into gardens or vineyards or over meadow ground or farm land before the harvest is ended, or upon such farm, meadow or pasture land, or forest tract as is inclosed or provided with signs of warning, or enters a forbidden private way, is finable up to $15 or subject up to fourteen days' imprisonment.

Every individual, having no right there under such circumstances, who is caught in the forests with instruments in his hands for cutting or felling is fined 15 cents; and whoever is caught in the forests committing a misdemeanor or trespass, and found to be armed with gun, pistol, saber, or other weapon is fined $4.30 therefor, and if any misdemeanor or crime is connected with it the offender is turned over to the courts of law for punishment. The interference with persons while in the discharge of their duties in the forests, or the maltreating of them either by word or deed, is a subject for judicial cognizance.

Fines are paid in money or worked out or served out in jail. A day's labor is reckoned at 30 cents, and a day's imprisonment at 25 cents. If a fine is converted into an imprisonment, the imprisonment can not last beyond a year.

Where wood is stolen there is no allowance for damages if the wood is dry or lying on the ground, or, although green and standing, is pressed down by other growth, or has been selected for felling. When seed is taken from uninclosed tracts damages are allowed only when the seeds are obtained by brushing them together or by beating the trees, or by knocking or tearing the seed from the trees; and in inclosed districts, not only in these cases, but even when the seed is simply picked up, is a sum set for damages. There is also no allowance for damages for trespass on meadow or farm land where the harvesting is finished. With respect to a gross trespass no damage is allowed when the trespass does not occur on inclosed tracts, or

when committed on mowing or meadow ground. For stealing leafage, dry cones or burrs, broom, heath, or other litter there is no sum laid for damages when the stolen stuff has been piled up into heaps by the person entitled to it, or been separated from the ground, or when it has been taken from a place where it was ready for delivery on the payment of its price. No damages are imposed for the taking of sods, stone, or earth, except when it is done on inclosed land. In all cases where much damage is done to side growth or the soil, in the commission of a grass, pasture, or other trespass special, damages are reckoned.

Forest misdemeanors or crimes are tried before the amtsgerichte (inferior courts of justice) without the presence of schöffen.* The office of prosecuting attorney is performed by forest officials designated for the purpose. Each case must, as a rule, be tried before that court within whose circuit the offense was committed. This feature of forest administration is under the control of the judicial department of the Government. The whole course of procedure before these courts I can not undertake to set forth. The accused can be represented by counsel or legal representative, but can be defended only when he is present. The forest officials are generally expected to get judicial authority for making an arrest, but when they come upon an individual suddenly while engaged in committing a trespass, or overtake him while in pursuit of him, and are afraid that he will get away from justice if not immediately captured, or his identity not be afterwards established, they are empowered to take him under arrest, but must give prompt notice of their action to the proper authorities; but it must be an act grave enough to subject the culprit to a fine or to send him to jail. Forest officials are expected not to employ any force in protecting the forests, except when it is done in self-defense.

As said before, those condemned to pay fines can work them out, but they can not be forced to do so. If the fine is not worked out in answer to the summons to do so the delinquent is deprived of his liberty, when no good excuse is offered for the failure to render the service. The labor must be performed by the party fined in person as a rule, and no substitute accepted, except in very special cases.

The forfeits levied and paid in in cash are turned over, after the deduction of the costs of collection, to the proprietors of the forests in which the injuries or trespasses for which they are assessed happened. A third part of the fines imposed and paid in in cash is also given to the parties injured by trespasses after the costs of collection have been taken off, if these people are not already in receipt of a third part of the fines.

BOUNDARIES.

The rangers are charged with the preservation of the boundary marks, and it is particularly enjoined upon them that they see to it that the keepers strictly observe all the instructions they receive in regard to boundaries and their marks, and are required to promptly have all injuries made good; but the refixing of all trigonometrical points is a subject for the surveyors, as is also the establishment of all boundaries and marks. The demesne forests are measured off in two ways into general divisions, and these again into subdivisions. The

* Members of a very small jury.

first is more for fiscal purposes, while the subdividing has the administration of the forests by the various officials in view.

CONCESSIONS.

The administrators of the forests are often called upon to grant the right to travel or drive cattle through open forests, which the Government allows them to concede, but only in writing and for no remuneration, and with the reservation that the privilege can be recalled at any time, and if the right granted is to be enjoyed longer than the year, the original paper concerning it is sent to the forest bureau at Darmstadt, while copies are retained by the forest officials. The experience of the Government has been that where such grants are carelessly made they often give rise to claims at law. Of course, a right granted for a consideration is a very different matter. It is the duty of the rangers to keep watch over the origination of new rights and keep them in check and prevent the extension of existing ones. All concessions of this nature that they make require the approval of the executive officials. It is also equally their duty to keep alive all rights which the Government on its part holds of a kindred nature.

SALE OF FOREST LAND.

The chief foresters and rangers have no right to sell or dispose of forest land belonging to the Grand Duchy of Hesse or its reigning family; but they can make reports and suggestions respecting the same. They are also forbidden, as a rule, to purchase for themselves or others any forest or agricultural land of good size which might be a good piece of property for the royal household to purchase.

PROCESSES.

Processes in forest matters are conducted on the part of the Government by attorneys at law selected by the forest bureau at Darmstadt, with approval of the finance department.

TAXATION.

The demesne lands are subject to taxation in the same way as the real property and valuable rights of private individuals. The same laws that apply to the latter affect the former in the same manner.

DIVISION OF LAND IN CULTIVATION.

As I understand it, all forest tracts belonging to one owner, which are under the charge or administration of one individual, are as a rule termed a wirthschaftsganzes, that is, an administrative whole.

Trees are generally allowed to grow to the following ages:

Regular forest growth.—Red beeches to 120 years; oaks to 160; yoke-elms, ashes, elms, and maples to 80; birches and alders to 60; other soft foliaceous trees to 40; white-fir to 100; pines and firs to 80, and larches to 60 years.

Topped growth and low growth.—Underwood to 10 years; oak grown for bark to 15; and other low or topped growth to 20 years.

Trees put in among others of a different kind are governed, as a general thing, by the felling age of the species of tree prevailing in that forest, unless they are intended to survive a felling for the purpose of acting as a protection to young growth. When trees are allowed to remain as a protection to young growth, and to grow over to their time for felling, the longest time they are permitted to grow

is fixed at the time the young growth would be entitled to grow according to the above limits plus their own. Even in the case of oaks the length of time is not allowed, as a rule, to exceed two hundred and fifty years. But there may be peculiar circumstances requiring a departure from this rule. In the forests of regular growth a felling is supposed to take place every twenty years, and the length of time from the appearance of the young trees to the day when they are ripe for felling is divided into periods of twenty years each.

Each wirthschaftsganzes, or administrative whole, is divided into what are known as Betriebsclassen, that is, administrative classes or parts when differences in trees, etc., exist calling therefor. Besides these Betriebsclassen, or administrative classes, there are what are known as ertragsfähigkeitsclassen, that is, classifications according to quality of soil. Of these there are usually not more than three different classes, termed I (good), II (medium), III (poor).

In arranging the forests for purposes of administration they are first considered under the head of area or division, according to soil and stock, respecting which a table is prepared and kept like the following:

Statement of the division of the areas and stock of the —— forests in the range ——.

Districts.			Area.		Quality of ground.	Administrative class.	Description of place of growth and growing stock.	Stock.			
No.	Name.	Division.	Acres.					Age at the beginning of 18—. Years.	Growth.	Close.	Quality.
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*k*	*l*	*m*

The rangers carry from the table of areas all divisions of forest areas in the same order into the columns *a* to *e* of the foregoing form, leaving two empty lines between each district. Only the amount of forest ground is thus carried over in the case of each division. In one of these empty lines, at the close of each district, in the columns *d e* (with the words "roads and ways," in the columns *g h*) is noted the area of the roads and ways belonging to it; and on the second empty line is put the area of the district (with the words "sum of the district" in the columns *g h*). When this is done the rangers, with the unfinished form in their hands, fill up the columns *f* to *m* in the forests. Into this statement a complete description of the stocks of trees and of the place where they grow is expected to be entered and every point noted which will probably be of weight in fixing afterwards the periods of felling and reckoning the amount of product. At the close of these tables their total amount is set forth. If any tract of forest land is without growth it is to be indicated in column *h* by the word "bare," with a statement of the use to which the parcel is put at the time. Where the trees are of a mixed character each kind of wood is to be expressed in tenths of the whole

stock. In the three columns *k l* and *m* are the words "good," "medium," and "poor" inserted. The sum of this table is afterwards divided up as follows:

Forest ground: Possessing growth; bare of stock.

Not forest ground: Roads and ways; other areas.

The age of the wood is ascertained as far as possible before this table is prepared, and divided into classess for administrative purposes when necessary, and for each class a statement or table like the following is gotten up:

Age table of the ——— forests in the range ———.

Districts.			Age of the stock in 18—.	I. Class (II to V same way) from — and more years. *d* (Also *e* to *h*)			VI. Class from 1 to 20 years.						Bare tracts. *l*		
							With top growth. *i*			Without top growth. *k*					
No.	Name.	Div.													
a	*b*	*c*	Years.	1.	2.	3.	1.	2.	3.	1.	2.	3.	1.	2.	3.

NOTE.—The Roman numerals indicate the classification as to quality; the Arabic figures indicate acres, say, and the hundredth parts thereof.

For each administrative class, when there are several of them, the columns of the table of ages are specially added up and set forth in a new table, like the following, in which there should be as many leading columns as there are administrative classes:

Summary of the age table of the ——— forests in the range ———.

Number of the class as to age.	Beech forests.						Coniferous trees.					
	Concrete.			Reduced.			Concrete.			Reduced.		
	1.	2.	3.	1.	2.	3.	1.	2.	3.	1.	2.	3.

NOTE.—The same remarks in the preceding form, as to letters and figures, apply to this. To the right follow other administrative classes and sums as before, as well as columns for remarks.

The table, as to ages, is intended to be a faithful presentation of the state of the forest at the time of preparation, and it is therefore required—

A. That each administrative class and group of stock should be entered separately and added up.

B. That each division should be attached to that class as to age to which its age properly belongs; and

C. That at the close an exhibit should be prepared of all the administrative classes.

If one administrative class is converted into another it is then treated as a subdivision of that division to which it will belong after

complete transformation, and the exhibit which is to be made at the close of the table of ages should contain these subdivisions so that the existing composition of the forest can be exactly seen at a glance. Among trees to be hewn down on the completion of their one hundred and twentieth year all those which are over one hundred years old are to be embraced in the first class as to age; in the case of those whose time is full at eighty years, the first class embraces all those over sixty years old, and so on. If now two administrative classes of different times for complete growth are classed together in one table, those running to one hundred and twenty years are put in a column for the first class as to age, which are from one hundred and one to one hundred and twenty years old, into which column other wood having only eighty years to reach is placed, which is sixty-one to eighty years old; and thus it is with all the classes.

When the statements as to area and age are finished they are forwarded to the directive officers for examination.

In the description of the forests all circumstances affecting them worthy of note are required to be mentioned, and are considered under the following heads: I, area; II, natural situation; III, waters in and about the forest; IV, climate and temperature; V, the soil and its composition; VI, natural peculiarities; VII, historical facts worthy of mention; VIII, proprietary and legal rights and claims; IX, buildings; X, ways, bridges, and the like used, with a statement of the percentage of roads and ways to the total forest area; XI, parts of forest areas not used for growing wood; XII, forest protection; XIII, stock of trees and previous manner of cultivation; XIV, product of wood and the factors affecting the same, with a statement of the relative qualities of soil and their extent; XV, the use and disposition of wood obtained.

In the cultivation of the forests a leading estimate or plan (Hauptwirthschafts plan) is drawn up, showing the divisions of the forest into periods for fellings, so that it can be seen from one year to another in what order the trees come for felling. These plans are gotten up in the following form:

Chief plan of administration of the regular forests of the —— range.

[Inner arrangement, left.]

Districts.			Area.	Age in 18—.	Quality of soil.		Division of the			
							I. Period from 18— to —.		II. Period from 18— to —.	
No.	Name.	Div.			No.	Comparative number.	Area.	Age at the time of use (average).	Area.	Age at the time of use (average).
			Concrete acres.	Years.			Reduced acres.	Years.	Reduced acres.	Years.

Chief plan of administration of the regular forests of the ——— range—Cont'd.

[Right.]

, stock into the different periods.

III. Period from —— to ——.		IV. Period from —— to ——.		V. Period from —— to ——.		VI. Period from —— to ——.				Bare tracts.	Remarks.
						With upper growth.		Without upper growth.			
Area.	Age at the time of use (average).	Area.	Age at the time of use (average).	Area.	Age at the time of use (average).	Area.	Age at the time of use (average).	Area.	Age at the time of use (average).	Area.	
Reduced acres.	Years.	Reduced acres.	Years.	Reduced acres.	Years.	Reduced acres.	Years.	Reduced acres.	Years.	Reduced acres.	

But these plans do not unalterably fix the fellings. They only show from the state of the forests at the time of their preparation how the fellings will presumably occur. The chief object of these estimates or plans is to fix the first period for felling, which is left largely to the judgment of the assessors, and is governed by the normal size of the forests as well as their condition at the time, and local circumstances. And they are expected, in making up their reports, to note every factor having an effect upon the formation of a period for felling, with special attention to the obtainment of a full growth upon areas poor in themselves, or which are carrying excessively aged or other stock whose growth has stopped.

It is also an object of these plans to show how an orderly succession of fellings and a proper classification as to age can be arranged without too great a sacrifice, so that it shall be possible to make up the later periods with stocks of trees of suitable area and age. At the expiration of each period these plans are made out anew, when, of course, the new period of growth springing up is put in the last class, and so on, *ad infinitum*, in rotation. Bare tracts are put in those periods to which they will probably belong when replanted with trees.

In order to make the preparation of these plans easier, and to indicate clearly all postponed fellings, every stock of trees is entered first in the period in which its age places it. In this way such fellings as have to be postponed and run over into another period can have a line drawn through them and their reduced size entered with red ink into that period in which their felling is to take place, and the reason of the change noted under "observations," or even set forth in a special statement when it is not self-apparent. This preliminary exhibit is also submitted to the directive officers for approval, with an explanatory report; and in a clean statement, afterwards made out, the areas of all stocks of trees in whose cases a postponement of felling has occurred are to be written with red ink, just as in the draught.

All small divisions which, indeed, according to age appertain to the first class, but, from their situation and connection with adjoining divisions, younger in growth, seem best adapted to be placed with them, are taken out of the first class and put into that to which the adjoining trees belong.

All divisions of the second class as to age, and even still younger growth, which, by reason of their character, and from other considerations, should undoubtedly be felled within the next twenty years, are taken out of their class and inserted in the first. This process can also be extended to later periods, when there are excellent grounds for placing the trees in another period to that which their age calls for. The areas as to age resulting from such alterations are compared with the normal size of an age class and period, and the distribution of the classes as to age as existing at the time into the different felling periods is required to be ascertained just as it would be if their normal state were going to be reached in the shortest space of time possible.

For durchforstungen (that is, thinning out forests, or cutting down trees here and there, and not a whole tract at once) and other products of the forest obtained during the various periods until the full time of growth is rounded, a table similar to the following is prepared of such as will presumably take place in the ensuing twenty years; but in the case of oaks an arrangement for following periods can be made out:

Special description of the tracts set for thinning for the periods from 18— *to* ——.

[Inner arrangement, left.]

Order of number.	Districts.			Quality of ground.	Area in concrete size.	Kind of wood.	Age in 18—.	Quality of stock.	Area to be thinned.	Thinnings—solid measure.		
										Estimate.		
	No.	Name.	Div.		Acres.		Years.		Acres.	Per acre.	Total.	Result of felling.

[Inner arrangement, right.]

Trunks and foregrowth to be cut out.				No. of the voucher.	Remarks.
Estimate.			Result of felling.		
Amount of wood (on the whole).	Growth.	Total.			

This table is deduced from the first table, or that relating to area. At the close of the table general observations are made as to what departures from the general rules were made necessary by local circumstances, and as to what the rotations in thinnings will probably

be. The column under "Remarks" is for special observations in reckoning the productive capacity of the single divisions.

With reference to the improvement of tracts which have only a thin growth of trees a table like the following is prepared, showing what cuttings are necessary in the next twenty years:

Special description of the tracts requiring improvement and of the cuttings necessary during the years ——.

[Inner arrangement, left.]

Order of number.	Districts.			Area concretely given.	Quality of ground.	Kind of wood.	Age in 18—.	Kind of stone, character of soil, situation, and description of stock.	Stock is to be felled in period—
	No.	Name.	Div.	Acres.			Years.		

[Right.]

Improvements.				Description of cuttings to be undertaken.	Products from the wood.	
Method of culture and nearer description of tract to be cultivated.	Kind of wood.	Calculated cost.			Kind of wood.	Solid measure.
		Dolls.	*Cts.*			

The bare tracts of ground are given in a general way in one of the columns of the table, setting forth the classification of trees as to age, but are also the subject of a special tabulation like this:

Special description of the bare tracts, their recultivation, their rotation, and the use made of them in administration of the forests ——, etc., of the —— range.

Order of number.	Districts.			Area.	Quality of ground.	Future kind of administration and class.	Wood to be cultivated during the next 20 years.			Chief use probably occurs.					Use in the mean time.
	Number.	Name.	Division.				Kind of cultivation.	Kind of wood.	Area.	First upon conclusion of the full time for growth.	In the VI period.	In the V period.	In the IV period.	In the III period.	
				Acres.					*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*	

This is for the ensuing twenty years, and if in this period of time any bare tract will not have a regrowth of trees, the reason is to be given in the table. At the close of the table remarks are made as to the order in which the bare tracts follow one another in cultivation and their connection with other divisions.

In Table 2 is a column designated "VI class from one to twenty years," in which is put the young wood growing up under the protection of old trees, to be gradually removed as the young growth becomes able to sustain itself. This process requires a certain length of time for accomplishment, in accordance with local conditions, and the area of the stock of trees already in young growth or being cut for the purpose is expected to stand in arithmetical proportion to this period of time; that is, this area embraces as many imaginary annual fellings as this period comprehends years, and the fractional part of the regular area of the periodenfläche (an area fixed for felling at the end of a certain period) as the years the process of removal is going on do parts of 20, the entire length of the whole period; that is, $\frac{1}{10}$ in the case of 2, $\frac{8}{10}$ in the case of 4, $\frac{3}{10}$ in the case of 6, and so on up to $\frac{20}{20}$, or to the whole extent of a periodenfläche when the process of renewal lasts twenty years. The result thereby obtained the rangers have to compare with the actual or concrete amount of area covered by the trees of this category, which latter is derived from—

(*a*) Those trees of the first class as to age which, although cut for renewal in young growth on account of poor growth, must be put in the same;

(*b*) The entries under *i* in Form 2.

When and in so far as the greater amount of the sums from *a* to *b* are not justified by a relative excess in the first class as to age taken into consideration at the same time with the amount of the following age class, the rangers have to select in the divisions entered in column *i* of the table of classification as to age as many tracts as are necessary to adjust this excess, while keeping constantly in view in doing so the amount of upper growth still on hand, order of felling, and all existing difficulty in the way of new growth. Concerning the stock that remains in column *i* of Form 2, after this is done, a special table is made out as follows:

[Inner arrangement, left.]

Order of number.	Districts.			Area.		Kind of wood.	Age.		Administrative class.	Trunks set apart to remain over.	
	Number.	Name.	Division.	Concrete amount.	Reduced amount.		In the year 18—.	At the time used (average).		Kind of wood.	Number.
				Acres.	*Acres.*		*Years.*	*Years.*			

[Inner arrangement, right.]

Product in solid measure.					Regrowth.				Remarks.	Number of voucher.
Estimate.				Result of felling.	Through natural renewal.	By cultivation.				
Present stock of wood.	Growth.	Total.	On the average per acre.			Method of culture.	Kind of wood.	Area.		
					Acres.			*Acres.*		

The plan of felling for the administrative (betriebs) classes of cropped or low growth is as follows:

Chief plan of felling and estimate of product, together with plan of cultivation of low growth.

[Inner arrangement, left.]

Order of number.	Chief number of the year's felling.	Number of years — to —.	Arrangement of fellings.						Kind of wood.	Quality of stock.	Age.	
			Number and lit. of the division.	Quality of ground.	In detail (acres).		Total of each felling (acres).				In the year —.	At the time of cutting.
					Concrete amount.	Reduced amount.	Concrete amount.	Reduced amount.			*Years.*	*Years.*

[Inner arrangement, right.]

Product in wood and bark.								Plan of cultivation.			Number of voucher.
Undergrowth.				Upper growth.		Total.		Method of culture.	Kind of wood.	Area.	
Per acre.		On the whole.									
Solid meas.	Tons.	Solid meas.	Tons.	Solid meas.	Tons.	Solid meas.	Tons.			Acres.	

The estimate as to pasturage and straw is gotten up like this:

Order of number.	Districts.			Kind of wood.	Age in the year —	Area—acres.
	Number.	Name.	Division.			
					Years.	Each year, or each group of years, of which the felling periods consist, receives here a special column, with the figures of the calendar years written above. The sum of the columns gives the area to be used within a certain period.

As to thinnings, the estimate is prepared for the next twenty years in the case of each kind of wood in the following manner:

Age.	I. Quality.		II. Quality.		III. Quality.		IV. Quality.		V. Quality.		Remarks.
	Cubic meters per acre.										
Years.	Chief stock.	Thinnings.	Chief stock.	Thinnings.	Chief stock.	Thinnings.	Chief stock.	Thinnings.	Chief stock.	Thinnings.	

Each year an estimate or plan of the fellings for the succeeding year is made up, and the chief foresters and the rangers are instructed to agree as far as possible with respect to the same. The estimate or plan is drawn up by the rangers, and in the latter part of the preceding year sent by them in duplicate to the chief foresters. The latter go over the completed estimate of the last year, and note all departures worthy of mention, and then transmit both plans to the directive officials. If the rangers do not admit the representations of the chief foresters, the directive officials are at once apprised of it, so that the facts can be inquired into on the ground. The propositions of the rangers for the ensuing year the chief foresters have to examine in a similar manner, and it is desired by the Government that rangers and chief foresters agree as to them as much as possible. If, however, they differ in their views to such an extent that no argument can be reached, the chief foresters are required to return the estimates or plans of the rangers to them, with their objections, within eight days after their receipt, who, as soon as possible after they get them back, and at least not later than ten days thereafter, proceed to lay the matter before the directive officers for decision. These either give at once their decision or refer the matter to one of their number for disposal, or to a chief forester. When the chief foresters agree with the rangers as to the plans or estimates they send them back to the rangers with their approval. This empowers the rangers to go on with their operations, but the chief foresters have to submit a general review accompanied by a

report to the directive officers and the plans may be changed by the last-mentioned in certain details. This general review is in form as follows:

[Inner arrangement, left.]

No.	Names of the sections or possessions.	Forest area.				Regulated etat.	In 18— was felled.		Fellings of wood for 18—.					Side uses.	
		Regular forest growth.	Low growth.		Bare tracts.		Above	Below	Fire wood.	Wood for building, etc., exclusive of bark.	Useful bark.	Total.	Average per acre.	Pasture.	Straw.
			Oaks for bark.	Other low growth.			The estimate.								
		Acres.	Acres.	Acres.	Acres.	Solid measure.	Solid measure.		Solid measure.					Acres.	

[Inner arrangement, right.]

Renewal through natural growth.		Renewal by art.				Ditches serving for inclosures or carrying off water.	Expenses.				Observations.
		Area.		Seed, including requirement for seed-beds.	Plants.						
Kind of wood.	Area.	Complete cultivation.	Improvement.		Foliaceous wood. / Coniferous wood.		Cultivation.	Highways.	Forest-ways.	Boundaries.	
	Acres.	Acres.	Acres.	Pounds.	100 plants.	Yards.	Dollars.				

This is based on the following returns, made by the rangers:

District.] *Plan of cultivation of the forests of the Ducal House for* 18—. [Range.

Description of area.	Area in wood.	Ways.	Total.
	Acres.		
Regular forest growth			
Oaks grown for bark			
Other low growth			
Bare tracts			
Total			

A.—*Fellings of wood.*

The annual estimate, as adjusted, amounts, according to No. — of the forest bureau of the ——, 18—,

In regular growth to ....solid measure. chief product. ....solid measure. intermediate product. ....solid measure. on the whole.
In topped growth to ....solid measure. chief product. ....solid measure. intermediate product. ....solid measure. on the whole.

Total .....do .....do .....do.

Result in 18—.

Fellings.	Should have amounted in solid measure—			Really gave finished off—							
				Up to ——.				To end of year.			
	Chief product.	Intermediate product.	Total.	Chief product.	Intermediate product.	Total.	Difference in totals, ±.	Chief product.	Intermediate product.	Total.	Difference in totals, ±.
Regular growth { Regular											
Regular growth { Extra											
Topped or low growth { Regular											
Topped or low growth { Extra											
Total											

Adjustment of departures in general and in detail.

No.	Ranger's proposal.	Result of revision.

Survey of the fellings arranged.

Number of the plan of felling.	Number and lit. of the districts and divisions.	Building wood and timber.		Fire-wood.														Grand total.
				Wood, — inches in diameter.					Wood. — inches in diameter.				Wood, — inches in diameter.			Brushwood or sticks.				
			Total.	Beeches, etc.	Birches, etc.	Oaks.	Coniferous trees.	Aspens, etc.	Beeches, etc.	Birches, etc.	Coniferous trees.	Aspens, etc.	Beeches, etc.	Oaks, etc.	Coniferous trees.	Beeches, etc.	Oaks, etc.	Aspens, etc.	Total.	
			Solid meas.	Loose measure.					Loose measure.							Solid meas.			Solid meas.	Solid meas.
Total																				
Cost of gathering in the wood for each foot sold.																				

Summary survey of the result of the operations in 18— *in the forests of the Grand Ducal House forest* ——.

[Inner arrangement, left.]

Name of the range.	Whole area of forest land.	I. Natural renewal.			II. Complete cultivation.			III. Improvement.			IV. Nurseries and seed-beds.	Ditches for drainage and inclosure.	
		Area.	Costs.		Area.	Costs.		Area.	Costs.			Length.	Costs.
			Total.	Per acre.		Total.	Per acre.		Total.	Per acre.			
	Acres	*Acres*	*Dolls.*	*Dolls.*	*Acres.*	*Dolls.*	*Dolls.*	*Acres.*	*Dolls.*	*Dolls.*	*Dolls.*		*Dolls.*

[Inner arrangement, right.]

VI. Purchase and preservation of implements.	VII. Other costs.	Amount of costs.		Materials in cultivation.				Bare tracts.	
		Total.	Per acre.	Seeds.		Plants.		At the beginning of the year.	At the end of the year.
				Foliacous wood.	Coniferous wood.	Foliacous wood.	Coniferous wood.		
Dollars.	*Dolls.*	*Dolls.*	*Dolls.*	*Per pound.*	*Per pound.*	*Per 100.*	*Per 100.*	*Acres.*	*Acres.*

Forest ——.] *Forests of the Grand Ducal House.* [Range.

Special survey of the —— of the operations —— for 18—.

No. of plan of culture.	No. of district, No. and lit. of division.	Area.			Material.								Ditches for drainage and inclosure.	Other expenditures.	Costs.				
		Natural renewal.	Seed.	Plants.											Per	In detail.		Total.	
		Acres	*Acres*	*Acres*											*Cents.*	*Dolls.*	*Cts.*	*Dolls.*	*Cts.*

The following subjects are treated of in the general annual review and accompanying report of the chief foresters in as brief a manner as possible:

(1) The carrying out of the previous year's plan, and the result as well with respect to fellings of trees as their cultivation.

(2) The new plan of operations, with special reference to previous administration, to the state of the forests and their present and futurg

productiveness, as well as the possibility and means of improving the quality of the wood and increasing its productiveness, to obstacles in the way of improvement, and necessity for carrying out the methods of cultivation suggested.

(3) Side products, especially such as pasturage and straw or litter, prospect for seed and its disposition, particularly respecting a better use of such products.

(4) Disposal of forest products, obstacles in the way of doing so, prices during the past year, and prospective price for the coming year.

(5) To what extent the forest products required are obtained, and what the prospect is for their continuance.

(6) Natural occurrences, unfavorable weather, and other mischances of the past year, so far as they exercised an influence upon the forests.

(7) The state of boundary marks and lines and the necessity for their preservation.

(8) What fellings took place during the year just closed, what counts were made, what auctions were held and wood delivered, and when they began and when they came to an end.

The rangers, as executive officers, are responsible for the execution of their plans according to rule, and are not allowed to depart from them without the concurrence of the chief foresters; and even these have no right to agree to change plans specially decided upon by the directive officers without the approval of the latter. If for any reason the plan of operations can not be carried out to the letter, or should be departed from, the rangers are powerless to do anything themselves, but must have recourse to their superiors for authorization. After a plan of operations has been carried into effect it is the duty of the chief foresters to see that it has been properly done.

In each financial period an estimate has to be made out of receipts and expenditures for the next period with a comparison of the figures of the last one. These estimates are of two kinds, annual ones and triennial, the latter being the financial period of the ducal government. The first is called a periodischer voranschlag (periodical estimate) and the latter the annual estimate. The first, as I understand it, is for submission to the legislature and its action. Then comes the annual estimate, whose limits are fixed by the legislative action on the chief estimate, as the appropriations made are in general not to be exceeded.

CONTRACTS.

The rangers make the contracts for wood-cutting—that is, the prices that are to be paid—which contracts need the approval of the authorities at Darmstadt only when the wages to be paid for the different kinds of wood exceed the maximum fixed by the local administrators, and are responsible for an exact compliance with the whole of the felling etat approved. Departures are allowed only when they do not exceed 5 per cent. of the etat through increased or diminished results in forests of cropped growth or through events which could not be avoided. Of the fellings provided for in the plans of operations no one is to be left undone without approval of the chief foresters. But departures from the individual items of a plan of operations are permitted when they are caused by differences in the products of the various fellings up to 50 per cent. of the estimate, by an increase or diminution of the product fixed for the year in a for-

est of cropped growth, and by wind or trespass. Violations of the entire estimate up to 10 per cent. are justified when the chief foresters and rangers are agreed as to the same.

FELLINGS.

The rangers and the keepers have, as a general rule, to mark the wood that is designed for felling, and the rangers are expected to watch all fellings, and see that no improper ones take place.

The rangers have the sorting and preparation of the wood to attend to, have to keep a record of all wood felled, and of the cubic amount of building timber.

The wood-cutters are engaged by the rangers, who are not allowed to do or permit anything to be done injurious to the forests; and whenever they know of a trespass, they have to report it to the rangers or keepers. All forest fires the wood-cutters have to endeavor at once to extinguish, and when it is not possible to accomplish this, then to promptly make the proper parties aware of their existence. They have to aid their superiors in discovering and capturing trespassers. They are not allowed to carry any wood from the forests. They are not permitted to make any fire in the forests between the beginning of April and the end of October, nor in very dry weather, and then only at such times and places as their superiors admit; and for every ten men not more than one fire is allowed. Each fire is to be no larger than is absolutely necessary, and to last only until mid-day, and not to be fed with anything but chips and shavings and such slight stuff as falls from the trees, and for at least one yard all around the fire all leaves, moss, dry grass, and the like must be removed. On leaving work or the place of fire it must be carefully put out. The wood-cutters are forbidden to take ashes with them. Smoking is allowed only in the case of closed pipes. They are not permitted to remain after night-fall where wood is being cut without the cognizance of their superiors. In cutting wood they are divided into squads of not less than six men each, one of whom acts as boss, and these men are all answerable for whatever occurs among them until the actual author is fixed. The wood-cutters can fell no tree until directed to do so by a superior.

The wood that is felled is all numbered, generally each lot separately, but several lots can sometimes receive the same number. The wood is numbered either successively as the different parcels are felled and can be counted off by the rangers in their tours of inspection, or afterwards by them when it has been prepared and assorted. The first method is preferred. If a felling is so extensive that it is convenient to divide it up into lots, or if a part is delivered by direction of the directive officers before the entire felling is through with the numbering has to take place immediately. When there are different kinds of wood in a felling two sets of numbers are used, one for building wood and the other for fire-wood; but when wood that is not to be used for fuel is from its nature liable to become confounded with the latter, continuous numbering takes place and a note made thereof in the reckoner's check. When the numbers run beyond 999 a special number is allowed when the wood is of such a character that it can not get mixed up with any other. The numbering is attended to by the rangers, who have the numbers put on the wood by the workmen with paint or red crayon or struck into the wood with a mallet.

Every distinct felling is given a separate number (Roman), just the one that it bears in the plan of operations for the year, which numbers run seriatim in each ranger's district, and have to agree with the numbers of the corresponding counts that are made of the wood felled. If, through any cause, intermediate numbers in the plan of operations for the year are not used, the numbers given to the wood that is felled must nevertheless agree with the number given the felling when proposed the preceding year in making up the plan of operations, and the intermediate numbers must be skipped. The very small fellings are embraced together quarterly under one number. All fellings occurring from October 1 to September 30 form the fellings of the year, and are reckoned in the fiscal year beginning six months previously. For each keep where wood or other products will probably be taken from the forests in the course of the year the rangers have to have two books, styled number-books, one for building wood and timber, and one for fire-wood, so that the keepers can easily write in them the products expected in their several keeps, and the rangers have to give these books to the keepers before counts take place. These books are gotten up in the following way:

(Title-page.)
Forests of the (Grand Ducal House). Range ———. Keep ———.
Products for the year 18—.
Number-book of the ——— wood, kept by keep ———.

Begun { the receipts on.....
the deliveries on.....
Closed { the receipts on.....
the deliveries on.....

Inner arrangement of the book for building wood and timber in the case of large quantities.

Receipts, building wood and timber.						Deliveries.
Sort.						
Tariff price.			At $———.	At $———.	At $———.	Manner of delivery, special estimate of value per ——, receiver, and other remarks.
No.	Dimensions. Diameter.	Dimensions. Length.				
	Inches.	Yards.	Solid measure.	Solid measure.	Solid measure.	

This form contains eleven vertical columns for a number of different kinds of wood and assortments, and takes up two pages of the number-book.

For a small number of different kinds of wood another form is employed, differing from the foregoing only in this, that it embraces but five vertical columns in the place of the eleven mentioned, and takes up but one page.

In the case of fire-wood, where there are a large number of differ-

ent kinds of wood and assortments, the number-book is arranged as follows:

[Part 1.]

Receipts.								Fire-wood.						
No.	Wood, in diameter.							Wood, in diameter.						
	Beeches, ashes, maples.		Birches, fruit-trees, elms, acacias.	Oaks.	Coniferous trees.	Alders, aspens, poplars, lindens, willows.		Beeches, ashes, maples.	Birches, fruit-trees, elms, acacias.	Oaks.	Coniferous trees.	Alders, aspens, poplars, lindens, willows.		
	Solid measure.													

[Part 2.]

Fire-wood.									Deliveries.
Small wood.				Fire-bark.	Sticks.				
Beeches, ashes, maples.	Oaks.	Coniferous wood.			Beeches, ashes, maples.	Oaks, birches, fruit-trees, elms, acacias.	Coniferous wood.	Alders, aspens, poplars, lindens, willows.	Manner of delivery, special estimate of value per ——, receiver, and other remarks.
100 bundles, solid measure.									

Where there are only one or two kinds of wood to be entered the form is as follows:

Receipts.								Deliveries.
No.								Manner of delivery, special estimates of value per ——, receiver, and other remarks.

Then, besides these books there are special Abzählungsprotocolle (minutes of counts), which have to be made up by the rangers, and differ from a number-book in these respects, that they are confined to one felling or one important number, while the number-books take in an entire keep, and serve chiefly for recording the receipts in wood, while the number-books serve also as a register of wood delivered. In these minutes the wood is entered according to the lots into which it is divided up. In them are noted, too, all lessening of prices owing to changes in the quality of wood: These minutes remain in the possession of the rangers, while the number-books are held by the keepers until all deliveries of wood are through with.

The rangers are responsible for the full and proper count of all wood.

The amount of wood felled and sold has to be entered as numbered by the keepers in the number-books as soon as properly prepared and numbered. The books are then summed up, compared with the delivery-checks of the bosses over the wood-cutters, and then handed to the rangers with these checks. The rangers then go over them and see that the entries are all right, when they permit the wood to be delivered; but none is allowed to be taken away until counted off by the rangers, who have to count as it lies all wood felled, make up their minutes therefrom, and have the number-books tally therewith.

As the rangers count the wood they strike or have it struck with the hammer they carry with them, mentioned in the first part of this dispatch, as an indication that everything is all right. As these number-books are for a whole keep, the keepers or the rangers in their behalf, before any entries are made, have to write in each new case, between cross lines, its date, the name of the district, the number of the division, and the Roman numbers of the felling, and separate each count from those between which it occurs by double-cross lines. The columns of the number-books relating to the delivery of wood the keepers dare not fill out until the count has been completed. In the column of remarks all decreases in the price of wood owing to change of quality have to be noted.

If standing or unassorted wood is delivered in consequence of special authority, it must be carefully valued for entry in the number-books, etc., in the same manner as other wood, and the remark made in reference to it that it was not regularly assorted or cut.

With respect to small fellings, the rangers at the beginning of each quarter have to make up a record, and small wood thrown down by the wind or carried off by trespassers has to be estimated and entered in this same record as well as in the number-books.

When intended fellings do not take place the numbers given them in the plan of operations for the year are entered in the hand-book of natural receipts, and where the results of the fellings would be written the reasons have to be given for the failure to fell.

Each record (Abzählungsprotocolle) is kept separate by itself, and on its cover are noted the dates of the close of the felling, of the delivery of the number-books to the keepers, and the count made by the rangers.

These records of counts are forwarded to the chief foresters, but before it is done the rangers have to enter in what is called a hand-book of natural receipts a summary of them.

Within eight days after the completion of a count the rangers transmit to the chief foresters the minutes of the same without any

accompanying report, who return them to the former within three days after their receipt, after making a record of their substance.

After the minutes of a count are forwarded to the chief foresters no rectification therein can be made until the ranger and keeper concerned have concurred in a certificate, signed by both of them, to their chief forester, setting forth the alteration that should be made, which, after it has been signed and approved by the chief forester, is annexed to the original minutes, and the minutes corrected in the proper place with red ink.

The chief foresters are obliged, either before or after the counting of the wood, to look at least once in the presence of the ranger concerned, at the larger and more important fellings, and see that all rules are being observed.

For all errors in the minutes of counts the rangers are responsible.

At the close of the felling season all minutes of counts are bound together in one volume, which are kept by the rangers.

Bark is also counted and recorded.

All side products which are reckoned by the lot or piece have to be counted and recorded by the rangers in a similar manner to wood.

The rangers, without the previous written approval of the chief foresters, have no right to change any part of the annual plan of operations; but slight differences in the costs of cultivation of the forests and in the number of trees planted on a particular spot, which must necessarily arise, are excepted. The making of contracts with respect to the cultivation of the forests rests with the rangers, as do the employment and dismissal of workmen, and require the approval of superior authority only when they exceed prescribed limits. The procuration of culture material is also lodged with the rangers, so far as it does not have to be obtained from the magazine at Darmstadt or from other forest districts, and needs approval only when the prices fixed are exceeded. The rangers are responsible for the proper cultivation of the forests, and have to fully instruct the keepers who have the superintendence of the various pieces of work as to what is to be done and how to be done, and are responsible for all failures on the part of the keepers to have a piece of work properly performed when the failure arises through incomplete or obscure instruction, and also for all delays on the part of the keepers which they have not reported with promptness to the chief foresters.

At Darmstadt there is what is called a central seed magazine, from which the forest officials get seed when necessary. At the close of their plans or estimates for each year the chief foresters are required to make out an estimate of the amount of seed that will be needed in their respective districts, independent of that gathered in their forests. They are expected to obtain whatever seed is necessary from their own forests when it is possible, and procure in the forests seed of fine quality when it can be done at less expense than through the magazine at Darmstadt, and in sending in their plans or estimates the foresters have to indicate where they think they can get good seed at reasonable rates. Then whatever is required from the magazine is supplied either directly from it or through its agency, and the forest officials have to inform the magazine whenever they learn of good opportunities to purchase fine seed.

With respect to young trees for planting the forest officials have to provide not only for immediate wants but for the demands of several years, and they are charged to keep constantly in view the re-

quirements of successive years that will probably arise and make provision for their satisfaction, and they are required to carefully observe how young trees are best brought up, and to collect seed with care. Not later than the 15th of August of each year the rangers have to send in a statement to the foresters showing what young trees can be delivered by them and what they are in want of. From these the chief foresters have to send in to the forest bureau at Darmstadt not later than the 1st of September a list of such young trees as are required in the respective ranges of their districts. What is requisite the central bureau at Darmstadt has supplied.

The conversion of the products of the forests into money is left to the rangers, under the control of the chief foresters. The wood of the Government forests, as a rule, is sold at public auction, and no wood is supposed to be disposed of until properly counted and recorded. Wood sold privately in the Government forests is sold according to a tariff fixed by the Government, which tariff is prepared every three years. The rangers are expected to get all auctions through by August. If the bids reach seven-tenths of the price set for the wood in the tariff or of its estimated worth, the rangers are empowered to make the sale, otherwise they submit a report to the chief foresters of the bids made and ask whether they shall accept them or not. If the rangers and chief foresters are in agreement the matter is closed, but if not, it is laid before their superiors for decision. Each ranger generally auctions off the wood of his district. When an auction takes place of products from different ranges one ranger is designated to attend to it. In the first case, a forest-keeper has to be on hand as a check to sign the minutes of the sale with the officiating ranger; in the latter, another ranger takes the place of the keeper. The sale generally occurs at the place where the wood or other forest products are. Those whom the foresters know to have been behindhand in their payments on previous occasions for wood bought, or to be without means, are not allowed to bid. And if bidders are seen to organize among themselves for the purpose of affecting prices the sale can be declared off. The wood is not allowed to be taken away until the money is paid, but sometimes an exception is made, but even then it can not be taken away until a paper is presented showing that the holder is entitled to have the wood. At the expiration of fourteen days whatever has not been paid for can be again auctioned off at the expense of the original buyer. From the day of the auction to the time of delivery of the wood into the custody of the buyer the Government sustains all losses arising from theft or other causes.

The small wood of the forests the poor are allowed to pick up free of charge.

Side products are disposed of in pretty much the same way as the regular wood. They are generally auctioned off, except when of very insignificant value.

The taking of litter from the forests is considered as a rule to be prejudicial to them in a greater or less degree, and only exceptionally of advantage. It is therefore kept in bounds as much as possible.

Tree plants are generally sold privately, as they are of too slight value and there is too little competition for them at auctions for them to be auctioned off.

The seed of coniferous trees is disposed of at public auction.

In forest culture the mast is of great importance, for on it depends

the rejuvenation of the forest. The foresters were therefore enjoined in 1843 to have the mast gathered up in all forest districts of the Government where there was not enough on hand for the natural renewal, to be done in the case of beeches by leasing out the mast for an appropriate natural rent, or exceptionally by paying for the collection of the mast; and in the case of oaks, to be achieved by the payment of small wages for the collection of the acorns, or by making culprits, fined for misdemeanors in the forests, gather them up. And it was ordered that the poorer classes of the country might have an opportunity to compete for the leasings of beach mast; that those forest districts wherein such mast could be collected should be divided up into such parcels that the poor could lease them for a natural rent. They are to be rented for money when no one will take them on natural rent, and the collection of the mast for compensation would amount to more than the nuts could be bought for. The beech acorns or nuts are gathered as soon as possible, as they do not keep well over winter. As a rule the beech trees are not allowed to be beaten for their seed, but only shaken.

The right to forest pasturage depends upon old rights or special agreements, and is everywhere subject to forest police control. Where they are leased they are given to the highest bidders under the following conditions:

The pasture can only be used by one herd under charge of its special herdsmen or keepers, and the herd can not be broken up into parts for pasturage. A number of individuals can unite together into one company for the purpose of obtaining and enjoying a pasturage in common. Lessees are responsible for all damages brought about by their herdsmen or animals. The use of any other way or ground than that granted by the lease subjects the offender to a penalty. Releasing or the taking of associates is forbidden unless consent is first obtained. The lessees, when required by the rangers, have to indicate the bounds of their pasture by wisps of straw. No goats or strange cattle are to be taken with the rightful herd upon pasture ground. The herds are not to rest long enough in one place to do mischief. Animals can not be pastured before the break of day or after nightfall. When the rangers consider it necessary they can forbid even the use of leased pasturage without the aggrieved party thereby acquiring a right to damages. Herdsmen guilty of misdemeanors have to be discharged when the rangers demand it, and others substituted for them.

Grass and fodder are generally disposed of at public auction.

With respect to grass-seed, it is provided that in those ranges in which grass-seed appears in such quantities that a good sum would probably be realized from its sale at public auction, the seed is auctioned off just before it becomes ripe.

(1) In all closes where it is thought young trees would be very likely injured by the collection of grass seed.

(2) On all grass plats where the grass has been leased or can be much better employed in feeding cattle.

(3) All forest tracts which have been leased for pasturage or on which claims to pasturage lie.

Forest land is sometimes temporarily used for agricultural purposes. Where it is not necessary to any extent the use of forest land is limited to such cases where temporary cultivation of it agriculturally is quite necessary in fitting the soil for forest growth, Where, on the

other hand, the needs of the community require the land for agricultural cultivation to a considerable extent, it must be allowed, although not necessary for the benefit of the trees that are to follow, though useful, and not detrimental to them. The character of the soil and its situation must also be taken into consideration, as well as the manner and time of recultivation with wood. The duration of the use of the land agriculturally is subject to the chief end had in view, namely, the cultivation of forest trees, and is not to be any longer than is consistent with this object, and no briefer than is necessary to realize the product had in view in devoting the soil to agricultural cultivation. The manner of use the soil is put to and the product has also to be considered. While the young trees are growing the soil on which they stand is oftentimes given over to agriculture. As a rule, however, the cultivation of wood and of field products must occur simultaneously. It is only in exceptional cases allowed to plant agricultural products first and forest products afterwards.

Where the Government has forest land for temporary tillage it rents it out to the highest bidder.

The forest keepers, in the strict sense of the word, have nothing whatever to do with forest accounts. The real administration of the forests is intrusted to the rangers, under the control of the chief foresters. All accounts have to be kept clearly and cleanly, and no words or figures are allowed to be scratched out with a knife, but only to have a line drawn through them in such a way that the original words and figures can be easily read. Besides the number-books already mentioned each ranger has for each fiscal year a special day and memorandum book, in which has to be entered all forest products, with the amounts of money converted into receipts as well as all expenditures, so that the book will always present an exact exhibit to date. The first part of the book is devoted to natural receipts and the delivery thereof, with the prices received. These books, at the beginning of the administrative year, are put together, paged, and bound for preservation, and they must contain all items which the rangers require in making up their annual accounts. The second part of the book is for credits received by them and payments made, or rather debts incurred and certificates of indebtedness given, as the rangers make no payments of money, but simply certify what is to be paid by the exchequer. These certificates the rangers are responsible for when mistakes occur and transmit them to the financial offices for settlement.

The chief foresters also keep day and memorandum books divided like those of the rangers, into two parts, the first having reference to the products of the forest converted into receipts, and the other to expenses. They are called control, day, and memorandum books.

The local forest officials keep an account, which has to be sent in, of all wood converted into receipts. They are prepared by the rangers, embracing the Government forests as well as corporative and private forests in which the Government has a pecuniary interest.

Then there are administrative accounts which are known as special or general accounts. The object of these accounts is to show how estimates have been observed and appropriations applied, and every departure from the budget's provisions must be justified. Their names indicate their character. They show, one specially, the other generally, how money appropriated has been used.

COMMUNAL FORESTS.

I have been treating all along particularly of the forests belonging to the State or its reigning house. I have now to make a few remarks with respect to communal or corporate forests. By the expression communal forests is meant in Hesse all forest land belonging to cities and country communities as well as that held by endowed institutions and corporative bodies of all kinds. These are under the charge of foresters also specially educated for the work and examined by the State. They are administered in pretty much the same manner as the state forests, and are subject to similar authority, but the communes and corporations have a voice in their management, and the department of justice is their highest authority.

The rangers in the administration of the communal forests in technical concerns are not subject to the magistrates and communal officers, but to the superior forest officials, whose instructions they have to implicitly obey; but they are required to ever keep in mind that they are managing the property of strangers, and that they should endeavor to take care of the forests in the interest of the common weal; that while they are not expected to obey the commands of communal officers they should treat them with all deference and bring their wishes to the attention of the superior forest officials, and to give communal officers whatever information they desire respecting the conduct of their forests. The forest officials have to decide how much wood shall be allowed to be cut, as a rule, in each communal forest every year.

These forests can not be changed in character, divided up or alienated, except with the approval of the forest officials. Each year estimates are prepared by the rangers and submitted to the burgomasters of the probable receipts and outlays in their respective forests during the succeeding year. These estimates the burgomasters present to the people's representatives, and communicate to the rangers the results of the latter's deliberations thereon. The rangers then send the whole thing to the chief foresters for their examination and consideration. When the local revisions take place, the burgomasters are invited to be present, when they desire it. Afterwards the burgomasters are furnished with an abstract of the estimates or plan of operations for the ensuing year. A general review or abstract of these plans the chief foresters send to the forest bureau at Darmstadt. If in considering and preparing these estimates, or plans of operation, the various parties having the matter in hand fail to agree, they are forwarded, when no agreement can be come to at all, to the forest bureau at Darmstadt.

The officials of this bureau then communicate with the bailiwick courts on the subject, and if they do not coincide with their views the courts turn the matter over to the department of justice, at Darmstadt, for decision. The plans are then carried out by the rangers as decided upon. In all cases where the rangers have to mark felled communal wood with their forest hammers they have to invite the burgomasters to accompany them in doing so, so that the latter can have it struck with the communal hammer if desired.

The wood-cutters in the communal forests are appointed by the owners of these forests or their representatives, under the control of the rangers, and these workmen must be experienced men whenever

the work to be performed requires skilled labor. The pilers have always to be approved by the rangers.

The burgomasters, as I understand it, make the contracts for fellings, which is done four weeks before the cutting begins, by letting it out to the lowest bidders, as a rule. This felling is done under the superintendence and control of the rangers. The numbering of the wood is done by the rangers, or under their direction, in the same manner as in the governmental forests, without the co-operation of the burgomasters. For each keep there are two number books, one for building wood and timber and the other for fire-wood. After the keepers have made their entries, and found them te be correct, they turn them over to the burgomasters for inspection. For each leading number of a count the burgomasters have to make up minutes, consisting of a transfer to them of what is contained in the number books, in which, however, several numbers having the same dimensions and the like price can be combined together in one item. The number books and minutes employed are like those in the case of the governmental forests. The certificate reads, however, as follows:

Forest of ——— Commune. Forest ———, Range ———, Keep ———.

Felling for the year 18—. Minutes of count No. ——.

District ———, Division ———. Close of felling on ——, 18—. Entered in the number book on ——, 18—. Control count made ——, 18—, in the presence of ranger ———.

Turned over to the burgomaster's office on the ——, 18—. Found correct with ——— solid cords and recorded.

Burgomaster's office; name of commune; forest keeper.

The minutes are then sent to the rangers, who make a control count of the wood, in the presence of the burgomaster, the forest keeper, the special piler, and boss or head of the squad of wood-cutters. The rangers carry the burgomasters' minutes, the burgomasters the number books of the forest keepers. When all is found correct the minutes and number books alluded to are signed by the ranger, burgomaster, and forest keeper concerned. Afterwards the keepers get the number books, and the burgomasters the minutes. What is contained in both the rangers enter in a control book. The small fellings are only recorded quarterly.

SEED.

The rangers set forth in their annual plans of operations what seed will probably be required, and what kinds and what quantity will have to be purchased, and report what will be needed from the grand ducal magazine. The communal authorities, or owners of communal forests, have to pay for the seed a price sufficient to cover the expense of purchasing, keeping, handling, and sending the same.

From the state seed magazine only the seed of coniferous trees can be procured, as well as under certain circumstances the seed of such foliaceous trees as are adapted to the purpose, such as the seed of the maple, ash, alder, and the like. Whatever other seeds are required, especially the seed of the oak, beech, etc., is to be obtained from the lowest bidders at public auction or by contract privately made. This is attended by the burgomasters in conjunction with the rangers. The rangers have to fix the conditions of delivery, examine the quality of the seed, and provide for its care until the time

of sowing. Plants as a rule are not allowed to be bought from private dealers.

For the purpose of encouraging the cultivation of tree plants by combining nurseries for fruit-trees with forest gardens, the chief foresters are authorized in all cases where communes, with the approval of the bailiwick courts, desire the establishment of such nurseries of fruit-trees, to favor them.

DISPOSITION OF WOOD.

The conversion into money of the wood and other products of their forests is left to the communes. The forest officials have only to regulate the deliveries and to watch out for the interests of the proprietors as well as to co-operate in fixing the scale of prices. These scales of prices or tariffs, so far as the same kinds and sortments of wood are concerned, as in the governmental forests, are gotten up in the same manner as those for the governmental forests, and the prices are determined by those realized in the locality at auctions where there is free competition. The sketches or draughts of them are drawn up by the rangers, who at once communicate them to the burgomasters. The latter lay them before the councilmen for consideration. When the councilmen are through with them they are returned with their views to the rangers, through the burgomasters. Then the rangers go over their draughts again, and consider them in connection with the suggestions and desires of the communal authorities. When this is through with they send them to the chief foresters, who in their turn transmit them with their views to the kreisrath, who settles the thing.

The views and desires of the communal authorities are conformed to as much as possible. These tariffs must run at least a year, and are expected to last for a series of years, with a revision every six years. They are for use in determining the price of wood when it is disposed of in any other way than at public auction, and their prices are not to be less than the average prices received at public sales. All wood is generally disposed of at public auction, as are other forest products.

The rangers keep a record in a control book of all wood and other forest products converted into natural receipts in the communal forests. They also keep a memorandum or control book of expenditures.

CONVERSION OF FOREST LAND TO OTHER PURPOSES.

With respect to the conversion of governmental and communal forests to other purposes there are no special statutory provisions, and the matter rests with the forest bureau of the finance department at Darmstadt and with the department of the interior and of justice. The fundamental doctrine on the subject, however, is that only such parcels of forest land are to be permitted to be devoted to other purposes when the soil is particularly adapted to agriculture and the remaining forest will not be injured by the change and no other disadvantages arise, such as the scattering of sand, the washing down of earth from the hillsides, etc., nor any unfavorable influence be exerted upon the climatic conditions prevailing in that quarter.

SUPERINTENDENCE OVER PRIVATE FORESTS.

The members of the nobility and patrimonial tribunals have the right to administer their forests pretty much as they please.

With respect to private forests of the second class in the provinces of Starkenburg and upper Hesse the owners have the right to manage them largely independent of the State, but are governed by the following regulations:

They can not convert forest land into agricultural without previously obtaining the permission of the Government to do so. When they desire to fell a piece of forest land and leave it bare for a few years, using it as farm land, with a view to preparing it for resowing with tree seed, they do not require any permission to do so from the forest officials, but must notify the rangers of their intention, to avoid being prosecuted for clearing, and so that the forest officials can see whether the circumstances making a request for permission unnecessary really exist. But the piece of ground can not remain longer than three years in this condition unless the Government permits it.

If a party fells his trees in such a way as to indicate a destruction of the forest, without having obtained permission to do so, the local foresters have to apprise the directive officials, and in pressing cases to simultaneously obtain an injunction from court. When an owner unauthoritatively destroys his forest or fails to sow or plant the ground after felling for a new growth, after the lapse of the proper time, the forest officials have to see that it is attended to, and either make the owner do it or do it themselves at his expense when he neglects to obey their commands; but he is still left the right to choose the kind of seeds or trees which shall be planted, and is always invited to be present when the planting is carried out. If he does not name the kind of tree he desires to grow on his ground, the forest officials will take whatever sort they think proper.

When an owner of forest ground denies the charge of having destroyed his forest, he can demand that the question be settled by the decision of a board of three persons, consisting of a local official, a forester from some other district, selected, by the forest bureau at Darmstadt, and a forester named by the party accused. Their decision must be submitted to the government at Darmstadt when rendered, and must contain an expression of opinion from each member of the board. If the opinion handed in is unfavorable to the party in whose case it is given, he must bear all costs arising from the arbitration.

All patches of forest separated from the main forest by houses, gardens, farms, meadows, or vineyards, and not greater than one hectare (2½ acres) in extent, are not subject to the foregoing provisions of law, and the owners can fell such tracts whenever they please without permission.

Owners of private forests are required to mark with wisps of straw or by ditches during the time of closure, when directed to do so by the forest officials, and to show the police of the place, before the opening of pasturage, the order to close, a list of which exhibits the police have to communicate to the rangers every year. The closures the owners of the forests have to observe as well as others, but have the right to take grass, litter, etc., with the foreknowledge of the foresters, when no injury is done, even in those parts of the forest under closure.

In Rhine-Hesse the law is that no forest is to be devastated or destroyed without permission, with the exception of small parcels separated from the main forests. The owner has to make good the damage, pay 6 franken for each square ruthe, and cease working the

land cleared; and whoever without authority cultivates bare forest land loses the harvest, pays a fine of 3 franken per square ruthe, and has to let the land lie as forest land.

All forest decrees or regulations affecting owners of forests reach also those enjoying rights under them. Only when a party claiming under another exceeds the rights lodged in the principal will the forest officials ordinarily interfere. Such cases it is said occur but seldom, and in the most of instances the forest officials interfere with such parties only by command of court (in a cause of action). With respect to such rights the general rule is that they are not to be exercised in such a way as to endanger the very existence of the forest and render it valueless to the possessor and thwart the very object for which it is designed, namely, the cultivation of forest trees, which rule is especially applicable to the gathering of straw and the use of pastures. In regard to the latter, those holding pasturage rights must permit the closing of one-third of the whole quantity of ground given over to pasture irrespective of the quality of the various parts and without any exceptional claim to the uninterrupted use of any particular part of the entire pasture.

CONCLUSION.

The laws of Hesse, the minister of state of the Duchy informs me, respecting the forests are contained in the publication entitled "Handbuch für die Forst-und Cameralverwaltung im Grossherzogthum Hessen" in the form of regulations. This book I shall transmit to the Department.

JAS. HENRY SMITH,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Mayence, July 5, 1887.

ENGLISH MERCHANDISE-MARKS ACT.

REPORT OF CONSUL FOLSOM.

CAUSES LEADING TO THE LAW.

During the past year or more the manufacturers of cutlery and hardware in Sheffield have suffered from the practice, which grew up on the Continent, of falsely marking goods made in Solingen and elsewhere with the name of this town, and imitations of the marks and names used by prominent Sheffield firms. Such goods were then placed upon the markets of the world as being of English manufacture and in direct competition with the genuine article. The local press took up the matter and showed that tons of cheap rubbish from Germany had been brought to Sheffield, where it was repacked and sent abroad as genuine English cutlery.

TRADING IN SPURIOUS CUTLERY.

The trading in these spurious manufactures at length assumed such large proportions that the workmen here began to realize its evil effect upon the reputation of Sheffield cutlery, and they were

not slow to protest against it. Then the corporation known as the Cutlers' Company of Sheffield took the matter in hand and bestowed a great deal of time and attention upon it, with the most favorable results.

DEPUTATION TO LORD STANLEY.

In February last deputations composed of the mayor, the master cutler, members of the board of aldermen, chamber of commerce, manufacturers, and workmen waited upon Lord Stanley, president of the Board of Trade in London, requesting him to further a measure in Parliament "to prevent and punish the false and fraudulent marking or labeling of goods, wares, and merchandise." At this interview a member of the delegation called attention to the fact that an order had recently been received in Sheffield from one of the colonies with a request that the goods should be stamped with a well-known brand and marked "best American cutlery." The Sheffield manufacturer declined to execute the order, on the ground that he was asked to send out goods with a misrepresentation on the face of them. The person giving the order said he could easily get it executed in Birmingham, and the order was sent and executed there.

The right honorable A. J. Mundella, who accompanied the deputation, in the course of his remarks upon this subject, said—

Last November I was in Paris and had a long conversation with M. Lockroy, the French minister of commerce. In that country there is now a bill before the legislature for a similar purpose to that which you are called upon to promote. The question is not simply one for Sheffield; it is a national question, because, although the Sheffield trades probably illustrate the difficulties better than any other, it affects more or less, probably, every industry in the country. * * * In March of last year the French passed a custom-house regulation which practically excludes from that country all foreign goods bearing French marks, names, indications, or descriptions of any kind whatever which would lead the public to believe that the articles were of French manufacture. Now, there is no reason on earth why we should not do the same. There would be no interference with the course of trade in any respect whatever. The French are perfectly justified in preventing such goods from being imported into their country, and I believe our customs laws will have to be very materially strengthened in that direction.

This false marking has a two-fold aspect. There is the false marking at home, and the members of the deputation have told you how much their own locality suffered from it. That false marking affects only the home trade, and there are difficulties attending such marking, because our custom-house does prohibit the importation of goods bearing the name of any town or of any person in any town in the United Kingdom. Whilst that is the case it does not prevent persons importing goods which are not marked and then putting false marks, false labels, or false descriptions upon them and selling them as English goods. But where we are most sinned against is where goods can be exported and where they can be marked, without any recourse whatever, with English names, towns, and trade-marks, colorably copied, and then sold in neutral markets all over the world as English-made goods. The report of the commission on depression of trade teems with evidence of this character, and the reports of our consuls abroad go to show that the trade in English goods is damaged by inferior articles falsely bearing good English names and good English marks, being sold as of English manufacture.

While in Paris I saw Mr. Crowe, our commercial *attaché* at the French embassy, who, perhaps, has a wider knowledge of foreign manufactures than any other man living. I discussed this subject with him and the bill of M. Lockroy, and he said, "I am perfectly familiar with the question. I have visited warehouse after warehouse and workshop after workshop in certain towns in Germany, and have seen nearly all the goods marked 'Sheffield.' I have told the manufacturers it was very complimentary to my countrymen to mark their goods with English names and towns, but that it was more complimentary than satisfactory, and ought to be put a stop to." This kind of thing has been done wholesale. These goods can not now be sent over here without risk, but they can be sent to the colonies, to India, to China, to all parts of the world, without touching at a British port at all, and thus never come under the surveillance of our custom-house officials. Goods can

now be sent from Antwerp, and through the German Lloyds, anywhere and to any extent, marked with English names, and that without any sort of supervision.

It was different when they had first to be brought to England and then transshipped. But that is done with and at an end.

It seems to me three things should be done. The first is to prevent the importation of foreign goods bearing English names. Let us do what the French have done, strengthen our custom-house laws and allow no foreign goods to come here bearing any description that is misleading, or calculated to mislead the customer into the belief that he is buying an English article.

The next thing to do is—and I am bound to say that M. Lockroy and some of our colonial representatives agree with me in this—to put as short, as simple, and as stringent and effective a measure as possible upon our statute-book to prevent false marking at home. As we desire to be protected from false marking in foreign countries, let us protect the foreigner at home. Mr. Carter gave a case in point just now when he said that an order was sent to Sheffield for goods which were to be marked as if they were of American manufacture. The American manufacturer has a right to say, "These goods are falsely marked." So would the German manufacturer under similar circumstances, and we should equally endeavor to put an end to false trading, whether against the foreigner or against ourselves.

If you put such a short and sharp measure on the statute-book as I have mentioned I can not see that anybody would be likely to object, inasmuch as it would not interfere with free trade or with the liberty of the subject.

Having such an act upon the statute-book we could go to foreign countries and say: "This is our law; this is what we have done; we ask you to do likewise." Our colonies, I am satisfied, would follow our example at once; and M. Lockroy told me France would be only too glad to reciprocate it. We carried the principle of such legislation in the convention at Rome. What is wanted is simple, straightforward, stringent, and prompt action in these three directions. That is the only way out of the difficulty, and nothing short of that will be satisfactory.

Speaking on the same subject at Liverpool last winter, Baron De Worms, secretary to the board of trade, said a deputation of Lancashire men from the town of Prescot had waited upon the board to urge the passage of an act to prevent the false marking of watches, and to require the placing of some mark, aside from the hall mark, upon all foreign-made watch-cases imported into the country. They complained that labor was cheaper abroad; that the works were made, to a great extent, by machinery; that hundreds of thousands of such watches were sent here, and, being sent to the assay office, received the hall mark, and were then sold as English goods. As a consequence the English watch-maker was unable to make a living.

MERCHANDISE-MARKS ACT.

The result of this discussion and agitation of the subject was the framing of the merchandise-marks act of 1887, which, by royal assent, became a law on the 23d day of August, 1887. Copies of the same are inclosed herewith. The importance of this act to all American manufacturers who export goods to England will be seen at a glance, and it is to be hoped that the law may in a great measure suppress the counterfeiting of American wares in this country. Care should be taken in the use of marks or names not registered here as trade-marks, because even an inadvertent employment of a simple device or the omission of the letters "U. S. A." to denote the place of manufacture might subject a shipment to forfeiture. It will be seen that the burden of proof is, by this act, thrown upon the defendant to establish his innocence, and it will no doubt assist materially in securing an enforcement of the law.

BENJAMIN FOLSOM,
Consul.

UNITED STATES CONSULATE,
Sheffield, August 27, 1887.

[Inclosure of Consul Folsom.]

An act to consolidate and amend the law relating to fraudulent marks on merchandise.

1. This act may be cited as the merchandise marks act, 1887.
2. (1) Every person who—
   (*a*) Forges any trade-mark; or
   (*b*) Falsely applies to goods any trade-mark or any mark so nearly resembling a trade-mark as to be calculated to deceive; or
   (*c*) Makes any die, block, machine, or other instrument for the purpose of forging, or of being used for forging, a trade-mark; or
   (*d*) Applies any false trade description to goods; or
   (*e*) Disposes of or has in his possession any die, block, machine, or other instrument for the purpose of forging a trade-mark; or
   (*f*) Causes any of the things above in this section mentioned to be done,

   shall, subject to the provisions of this act, and unless he proves that he acted without intent to defraud, be guilty of an offense against this act.

   (2) Every person who sells, or exposes for, or has in his possession for, sale, or any purpose of trade or manufacture, any goods or things to which any forged trade-mark or false trade description is applied, or to which any trade-mark or mark so nearly resembling a trade-mark as to be calculated to deceive is falsely applied, as the case may be, shall, unless he proves—
   (*a*) That having taken all reasonable precautions against committing an offense against this act, he had at the time of the commission of the alleged offense no reason to suspect the genuineness of the trade-mark, mark, or trade description; and
   (*b*) That on demand made by or on behalf of the prosecutor, he gave all the information in his power with respect to the persons from whom he obtained such goods or things; or
   (*c*) That otherwise he had acted innocently,

   be guilty of an offense against this act.

   (3) Every person guilty of an offense against this act shall be liable—
   (*a*) On conviction on indictment, to imprisonment, with or without hard labor, for a term not exceeding two years, or to fine, or to both imprisonment and fine; and
   (*b*) On summary conviction to imprisonment, with or without hard labor, for a term not exceeding four months, or to a fine not exceeding £20, and in the case of a second or subsequent conviction to imprisonment, with or without hard labor, for a term not exceeding six months, or to a fine not exceeding £50; and
   (*c*) In any case to forfeit to Her Majesty every chattel, article, instrument, or thing by means of or in relation to which the offense has been committed.

   (4) The court before whom any person is convicted under this section may order any forfeited articles to be destroyed or otherwise disposed of as the court thinks fit.

   (5) If any person feels aggrieved by any conviction made by a court of summary jurisdiction, he may appeal therefrom to a court of quarter sessions.

   (6) Any offense for which a person is under this act liable to punishment on summary conviction may be prosecuted, and any articles liable to be forfeited under this act by a court of summary jurisdiction may be forfeited in manner provided by the summary jurisdiction acts: *Provided*, That a person charged with an offense under this section before a court of summary jurisdiction shall, on appearing before the court, and before the charge is gone into, be informed of his right to be tried on indictment, and if he requires be so tried accordingly.

3. (1) For the purposes of this act—

   The expression "trade-mark" means a trade-mark registered in the register of trade-marks kept under the patents, designs, and trade-marks act, 1883, and includes any trade-mark which, either with or without registration, is protected by law in any British possession or foreign state to which the provisions of the one hundred and third section of the patents, designs, and trade-marks act, 1883, are, under order of council, for the time being applicable.

The expression "trade description" means any description, statement, or other indication, direct or indirect,

(*a*) as to the number, quantity, measure, gauge, or weight of and goods; or

(*b*) as to the place or country in which any goods were made or produced; or

(*c*) as to the mode of manufacturing or producing any goods; or

(*d*) as to the material of which any goods are composed; or

(*e*) as to any goods being the subject of an existing patent, privilege, or copyright;

and the use of any figure, word, or mark which, according to the custom of the trade, is commonly taken to be an indication of any of the above matters, shall be deemed to be a trade description within the meaning of this act.

The expression "false trade description" means a trade description which is false in a material respect as regards the goods to which it is applied, and includes every alteration of a trade description, whether by way of addition, effacement, or otherwise, where that alteration makes the description false in a material respect, and the fact that a trade description is a trade-mark, or part of a trade-mark, shall not prevent such trade description being a false trade description within the meaning of this act.

The expression "goods" means anything which is the subject of trade, manufacture, or merchandise.

The expressions "person," "manufacturer, dealer, or trader," and "proprietor" include any body of persons corporate or unincorporate.

The expression "name" includes any abbreviation of a name.

(2) The provisions of this act respecting the application of a false trade description to goods shall extend to the application to goods of any such figures, words, or marks, or arrangement or combination thereof, whether including a trade-mark or not, as are reasonably calculated to lead persons to believe that the goods are the manufacture or merchandise of some person other than the person whose manufacture or merchandise they really are.

(3) The provisions of this act respecting the application of a false trade description to goods, or respecting goods to which a false trade description is applied, shall extend to the application to goods of any false name or initials of a person, and to goods with the false name or initials of a person applied, in like manner as if such name or initials were a trade description, and for the purpose of this enactment the expression false name or initial means, as applied to any goods, any name or initials of a person which—

(*a*) are not a trade-mark, or part of a trade-mark; and

(*b*) are identical with, or a colorable imitation of the name or initials of a person carrying on business in connection with goods of the same description, and not having authorized the use of such name or initials; and

(*c*) are either those of a fictitious person or of some person not bona fide carrying on business in connection with such goods.

4. A person shall be deemed to forge a trade-mark who either—

(*a*) without the assent of the proprietor of the trade-mark makes that trade-mark or a mark so nearly resembling that trade-mark as to be calculated to deceive; or

(*b*) falsifies any genuine trade-mark, whether by alteration, addition, effacement, or otherwise;

and any trade-mark or mark so made or falsified is in this act referred to as a forged trade-mark.

Provided, That in any prosecution for forging a trade-mark the burden of proving the assent of the proprietor shall lie on the defendant.

5. (1) A person shall be deemed to apply a trade-mark or mark or trade description to goods who—

(*a*) applies it to the goods themselves; or

(*b*) applies it to any covering, label, reel, or other thing in or with which the goods are sold or exposed or had in possession for any purpose of sale, trade, or manufacture; or

(*c*) places, incloses, or annexes any goods which are sold or exposed or had in possession for any purpose of sale, trade, or manufacture, in, with, or to any covering, label, reel, or other thing to which a trade-mark or trade description has been applied; or

(*d*) uses a trade-mark or mark or trade description in any manner calculated to lead to the belief that the goods in connection with which it is used are designated or described by that trade-mark or mark or trade description.

(2) The expression "covering" includes any stopper, cask, bottle, vessel, box, cover, capsule, case, frame, or wrapper; and the expression "label" includes any band or ticket.

A trade-mark or mark or trade description shall be deemed to be applied whether it is woven, impressed, or otherwise worked into or annexed or affixed to the goods, or to any covering, label, reel, or other thing.

(3) A person shall be deemed to falsely apply to goods a trade-mark or mark who without the assent of the proprietor of a trade-mark applies such trade-mark, or a mark so nearly resembling it as to be calculated to deceive; but in any prosecution for falsely applying a trade-mark or mark to goods the burden of proving the assent of the proprietor shall lie on the defendant.

6. Where a defendant is charged with making any die, block, machine, or other instrument for the purpose of forging, or being used for forging, a trade-mark, or with falsely applying to goods any trade-mark or any mark so nearly resembling a trade-mark as to be calculated to deceive, or with applying to goods any false trade description, or causing any of the things in this section mentioned to be done, and proves—

(*a*) That in the ordinary course of his business he is employed, on behalf of other persons, to make dies, blocks, machines, or other instruments for making, or being used in making, trade-marks, or, as the case may be, to apply marks or descriptions to goods, and that in the case which is the subject of the charge he was so employed by some person resident in the United Kingdom, and was not interested in the goods by way of profit or commission dependent on the sale of such goods; and

(*b*) That he took reasonable precautions against committing the offense charged; and

(*c*) That he had, at the time of the commission of the alleged offense, no reason to suspect the genuineness of the trade-mark, mark, or trade description; and

(*d*) That he gave to the prosecutor all the information in his power with respect to the persons on whose behalf the trade-mark, mark, or description was applied—

he shall be discharged from the prosecution, but shall be liable to pay the costs incurred by the prosecutor, unless he has given due notice to him that he will rely on the above defense.

7. Where a watch-case has thereon any words or marks which constitute, or are by common repute considered as constituting, a description of the country in which the watch was made, and the watch bears no description of the country where it was made, those words or marks shall prima facie be deemed to be a description of that country within the meaning of this act, and the provisions of this act with respect to goods to which a false trade description has been applied, and with respect to selling or exposing for, or having in possession for sale, or any purpose of trade or manufacture, goods with a false trade description, shall apply accordingly; and for the purposes of this section the expression "watch" means all that portion of a watch which is not the watch-case.

*8. (1) Every person who after the date fixed by order in council sends or brings a watch-case, whether imported or not, to any assay office in the United Kingdom for the purpose of being assayed, stamped, or marked, shall make a declaration declaring in what country or place the case was made. If it appears by such declaration that the watch-case was made in some country or place out of the United Kingdom, the assay office shall place on the case such a mark (differing from the mark placed by the office on a watch-case made in the United Kingdom), and in such a mode as may be from time to time directed by order in council.

(2) The declaration may be made before an officer of an assay office, appointed in that behalf by the office (which officer is hereby authorized to administer such a declaration), or before a justice of the peace, or a commissioner having power to administer oaths in the supreme court of judicature in England or Ireland, or in the court of session in Scotland, and shall be in such form as may be from time to time directed by order in council.

(3) Every person who makes a false declaration for the purposes of this section shall be liable, on conviction or indictment, to the penalties of perjury, and on summary conviction to a fine not exceeding twenty pounds for each offense.

9. In any indictment, pleading, proceeding, or document, in which any trade-mark, or forged trade-mark, is intended to be mentioned, it shall be sufficient, without further description, and without any copy or fac-simile, to state that trade-mark, or forged trade-mark, to be a trade-mark or forged trade-mark.

10. In any prosecution for an offense against this act—

(1) A defendant, and his wife or her husband, as the case may be, may, if the defendant thinks fit, be called as a witness, and, if called, shall be sworn and examined, and may be cross-examined and re-examined in like manner as any other witness.

(2) In the case of imported goods, evidence of the port of shipment shall be prima facie evidence of the place or country in which the goods were made or produced.

11. Any person who, being within the United Kingdom, procures, counsels, aids, abets, or is accessory to the commission, without the United Kingdom, of any act, which, if committed in the United Kingdom, would under this act be a misdemeanor, shall be guilty of that misdemeanor as a principal, and be liable to be indicted, proceeded against, tried, and convicted in any county or place in the United Kingdom in which he may be, as if the misdemeanor had been there committed.

12. (1) Where, upon information of an offense against this act, a justice has issued either a summons requiring the defendant charged by such information to appear to answer to the same, or a warrant for the arrest of such defendant, and either the said justice on or after issuing the summons or warrant, or any other justice, is satisfied by information on oath that there is reasonable cause to suspect that any goods or things by means of or in relation to which such offense has been committed are in any house or premises of the defendant, or otherwise in his possession or under his control in any place, such justice may issue a warrant under his hand by virtue of which it shall be lawful for any constable named or referred to in the warrant, to enter such house, premises, or place at any reasonable time by day, and to search there for and seize and take away those goods or things; and any goods or things seized under any such warrant shall be brought before a court of summary jurisdiction for the purpose of its being determined whether the same are or are not liable to forfeiture under this act.

(2) If the owner of any goods or things which, if the owner thereof had been convicted, would be liable to forfeiture under this act, is unknown or can not be found, an information or complaint may be laid for the purpose only of enforcing such forfeiture, and a court of summary jurisdiction may cause notice to be advertised stating that, unless cause is shown to the contrary at the time and place named in the notice, such goods or things will be forfeited, and at such time and place the court, unless the owner or any person on his behalf, or other person interested in the goods or things, shows cause to the contrary, may order such goods or things or any of them to be forfeited.

(3) Any goods or things forfeited under this section, or under any other provision of this act, may be destroyed or otherwise disposed of, in such manner as the court by which the same are forfeited may direct, and the court may, out of any proceeds which may be realized by the disposition of such goods (all trade-marks and trade descriptions being first obliterated), award to any innocent party any loss he may have innocently sustained in dealing with such goods.

13. The act of the session of the twenty-second and twenty-third years of the reign of Her present Majesty, chapter 17, entitled "An act to prevent vexatious indictments for certain misdemeanors," shall apply to any offense punishable on indictment under this act, in like manner as if such offense were one of the offenses specified in section 1 of that act, but this section shall not apply to Scotland.

14. On any prosecution under this act the court may order costs to be paid to the defendant by the prosecutor, or to the prosecutor by the defendant, having regard to the information given by and the conduct of the defendant and prosecutor respectively.

15. No prosecution for an offense against this act shall be commenced after the expiration of three years next after the commission of the offense, or one year next after the first discovery thereof by the prosecutor, whichever expiration first happens.

16. Whereas it is expedient to make further provision for prohibiting the importation of goods which, if sold, would be liable to forfeiture under this act; be it therefore enacted as follows:

(1) All such goods, and also all goods of foreign manufacture bearing any name or trade-mark being or purporting to be the name or trade-mark of any manufacturer, dealer, or trader in the United Kingdom, unless such name or trade-mark is accompanied by a definite indication of the country in which the goods were made or produced, are hereby prohibited to be imported into the United Kingdom, and, subject to the provisions of this section, shall be included among goods prohibited to be imported as if they were specified in section 42 of the customs consolidation act, 1876.

(2) Before detaining any such goods, or taking any further proceedings with a view to the forfeiture thereof under the law relating to the customs, the commissioners of customs may require the regulations under this section, whether as to information, security, conditions, or other matters, to be complied with, and may satisfy themselves in accordance with those regulations that the goods are such as are prohibited by this section to be imported.

(3) The commissioners of customs may from time to time make, revoke, and vary regulations, either general or special, respecting the detention and forfeiture of goods the importation of which is prohibited by this section, and the conditions, if any, to be fulfilled before such detention and forfeiture, and may by such regulations determine the information, notices, and security to be given, and the evidence requisite for any of the purposes of this section, and the mode of verification of such evidence.

(4) Where there is on any goods a name which is identical with or a colorable imitation of the name of a place in the United Kingdom, that name, unless accompanied by the name of the country in which such place is situate, shall be treated for the purposes of this section as if it were the name of a place in the United Kingdom.

(5) Such regulations may apply to all goods the importation of which is prohibited by this section, or different regulations may be made respecting different classes of such goods or of offenses in relation to such goods.

(6) The commissioners of customs, in making and in administering the regulations, and generally in the administration of this section, whether in the exercise of any discretion or opinion, or otherwise, shall act under the control of the commissioners of Her Majesty's treasury.

(7) The regulations may provide for the informant reimbursing the commissioners of customs all expenses and damages incurred in respect of any detention made on his information, and of any proceedings consequent on such detention.

(8) All regulations under this section shall be published in the London Gazette and in the Board of Trade Journal.

(9) This section shall have effect as if it were part of the customs consolidation act, 1876, and shall accordingly apply to the Isle of Man as if it were part of the United Kingdom.

(10) Section 2 of the revenue act, 1883, shall be repealed as from a day fixed by regulations under this section, not being later than the 1st day of January, 1888, without prejudice to anything done or suffered thereunder.

17. On the sale or in the contract for the sale of any goods to which a trade-mark, or mark, or trade description has been applied, the vendor shall be deemed to warrant that the mark is a genuine trade-mark and not forged or falsely applied, or that the trade description is not a false trade description within the meaning of this act, unless the contrary is expressed in some writing signed by or on behalf of the vendor and delivered at the time of the sale or contract to and accepted by the vendee.

18. Where, at the passing of this act, a trade description is lawfully and generally applied to goods of a particular class, or manufactured by a particular method, to indicate the particular class or method of manufacture of such goods, the provisions of this act with respect to false trade descriptions shall not apply to such trade description when so applied: provided that where such trade description includes the name of a place or country, and is calculated to mislead as to the place or country where the goods to which it is applied were actually made or produced, and the goods are not actually made or produced in that place or country, this section shall not apply unless there is added to the trade description, immediately before or after the name of that place or country, in an equally conspicuous manner with that name, the name of the place or country in which the goods were actually made or produced, with a statement that they were made or produced there.

19. (1) This act shall not exempt any person from any action, suit, or other proceeding which might, but for the provisions of this act, be brought against him.

(2) Nothing in this act shall entitle any person to refuse to make a complete discovery, or to answer any question or interrogatory in any action, but such discovery or answer shall not be admissible in evidence against such person in any prosecution for an offense against this act.

(3) Nothing in this act shall be construed so as to render liable to any prosecution or punishment any servant of a master resident in the United Kingdom who bona fide acts in obedience to the instructions of such master, and, on demand made by or on behalf of the prosecutor, has given full information as to his master.

20. Any person who falsely represents that any goods are made by a person holding a royal warrant, or for the service of Her Majesty, or any of the royal family, or any Government department, shall be liable, on summary conviction, to a penalty not exceeding £20.

21. In the application of this act to Scotland the following modifications shall be made:

The expression "summary jurisdiction acts" means the summary procedure act, 1864, and any acts amending the same.

The expression "justice" means sheriff.

The expression "court of summary jurisdiction" means the sheriff court, and all jurisdiction necessary for the purpose of this act is hereby conferred on sheriffs.

22. In the application of this act to Ireland the following modifications shall be made:

The expression "summary jurisdiction acts" means, so far as respects the police district of Dublin metropolis, the acts regulating the powers and duties of justices of the peace of such district, and as regards the rest of Ireland means the petty sessions (Ireland) act, 1851, and any act amending the same.

The expression "court of summary jurisdiction" means justices acting under those acts.

23. The merchandise marks act, 1862, is hereby repealed, and any unrepealed enactment referring to any enactment so repealed shall be construed to apply to the corresponding provision of this act: provided that this repeal shall not affect—

(*a*) Any penalty, forfeiture, or punishment incurred in respect of any offense committed against any enactment hereby repealed; nor

(*b*) The institution or continuance of any proceeding or other remedy under any enactment so repealed for the recovery of any penalty incurred, or for the punishment of any offense committed, before the commencement of this act; nor

(*c*) Any right, privilege, liability, or obligation required, accrued, or incurred under any enactment hereby repealed.

THE LOFODEN COD FISHERIES.

REPORT OF CONSUL-GENERAL ANDERSON.

I made a journey last March to the Lofoden Islands and Tromsoe, in the northern part of Norway, to regions seldom visited by travelers in that season of the year.

I collected a few notes, especially in regard to the cod-fishing industry at Lofoden. These I have since supplemented with facts from other sources.

From Christiania the usual route for tourists to the North Cape, of which the number is greatly increasing year by year, with the United States well represented, is by rail to Throndhjem and thence by steamer along the wild, broken coast northeastward.

Gradually rising as it leads from Christiania the railroad passes through an irregular and largely uncultivated country, which offers little of interest to the traveler excepting the rugged scenery. The railroad winds and curves along the banks of swift rivers around the

foot of mountain spurs and crosses and recrosses bold chasms, the somber landscape occasionally enlivened by the broad but often rather stony fields of some hard-working, thrifty Norwegian farmer. The snow-capped mountains are never out of sight, and in due time the loitering train brings up at the town Röros, where rich copper mines have been worked ever since their discovery, in the year 1623; a town whose traffic is of no small importance to the surrounding country. From here the road descends through Guldalen to Throndhjem, and after a journey of 24 hours the traveler is more than glad to be freed from the small, close coupé and stretch his limbs in the clear, bracing air of this northern clime. The steamship routes between Christiania and Throndhjem are said to satisfy in a better manner the wants of commerce between the southern and northern parts of Norway, and consequently this railroad is financially considered not a paying enterprise. Four Throndhjem steamers ply regularly thrice a week the year round northward along the coast and far to the east of North Cape, connection being maintained with all the fjords or bays and the outlying islands by means of local steamers. In summer special tourist-steamers make an eight days' trip from Throndhjem to the North Cape and return, and now a railroad is building from Ofoten, a point on the coast opposite the Lofoden Isles, 150 miles within the Arctic Circle, straight across the Scandinavian peninsula to Lulea, near the head of the Gulf of Bothnia.

DOWN THRONDHJEM FJORDS.

Sailing down Throndhjem Fjord on the well-built and comfortable iron steamers—within the last few years iron has almost entirely replaced wood in the construction of all Scandinavian steam vessels, until now a wooden-built steamer is a rarity in any of these ports—one now perceives a change in the character of the scenery. Broad, sloping fields extend back to the foot of the granite cliffs, which here are much higher and more sharply defined than those in the southeastern part of Norway. The fields, too, are of interest. We are now in the same latitude as the northern part of Hudson Bay and Godthaab, in Greenland, but owing to the influence of the Gulf Stream this is one of Norway's most productive districts, and grain, cattle, horses, and sheep form a large part of the export. As the steamer leaves the fjord and turns northward, finding its way among the thousands of islands along the coast, the scenery again changes and there is much to claim the interest of the traveler. Farms become more rare, or rather they become less visible, being hid in valleys behind the mountains. What the traveler sees is a succession of towering, barren, granite headlands, with here and there a fisherman's hut, or a village shut in among the rocks or clinging to the mountain side. On the outside, toward the broad Atlantic, the waters are seen dashing and breaking over the reefs and outlying islands, which take the brunt of the storms, and of which the larger ones are inhabited by hardy fishermen. In some places the ship passes within a few yards of, apparently not more than an arm's length from, gigantic perpendicular rocks, so abruptly do they rise from the water. Here and there within the entrance of the fjords large white rings are seen, painted on the surface of the rock to denote safe anchorage, and here huge iron rings are fastened to the rocks as moorings for ships which seek shelter from the storms outside.

PAINTED CASCADES.

Occasionally white foaming cascades are seen actually painted from the top to the bottom of the rocks, and upon inquiry you are informed that they serve to allure the salmon. They say that the salmon, thinking them to be natural water-falls, spring from the sea in mighty efforts to reach a spawning-place above, and, striking the rock, fall back into the basin-shaped nets stretched in the water below.

WHALES.

On all sides whales are seen spouting, sometimes coming very near the ship, but the continued scouring of these waters for many years by the numerous whaling vessels has made those animals somewhat more shy of all ships than they formerly were.

In the headlands here granite is often replaced by Silurian strata, and, although no forests are seen, the rocks are far more richly covered by smaller vegetation than in the south of Norway. Now and then the rocks themselves assume fantastic shapes, and at one point we get a view of one of the world's mightiest glaciers, the celebrated Svartisen (black ice). In the vicinity of the Arctic Circle we pass various islands and rocks which bear names denoting the shape they have taken. Thus we have the Seven Sisters, the Horseman Island, the Red Island, Lion, etc., each being connected with a legend in the Norwegian's mind. To the left, rising abruptly from the sea, is a large mountain bearing the name Forghatten (the Forghet), through which, high above the water, there is a natural tunnel of great dimensions. At the station of Breno, situated on an island of the same name, about half way between Throndhjem and the Lofoden Islands, are found a church, a physician, and a telegraph office. This and other telegraph offices on the route are of great value in announcing the approach of herrings at coast stations further south, in which case salt and barrels are immediately dispatched to the fishing grounds by extra steamers.

LOFODEN ISLES.

Proceeding northward, we soon reach the object of our journey, the Lofoden Isles, a close, continuous mountainous group extending from the sea in a northeasterly direction until they reach the coast about one hundred and fifty miles north of the Arctic Circle. As we approach the islands in the winter season the scene is a most animated one. Everywhere the small, open, yet wonderfully strong and steady boats of the fishermen are seen scudding along, with their small, square sails bulged by a stiff breeze, often miles from land, or, being at work, they lie tossing upon the waves like ducks, their crews of from two to eight men being busy casting and drawing their hand-lines or planting or raising their trimmers and nets.

TOWN OF TROMSOE.

The most important town north of Throndhjem is Tromsoe, a city of about 6,000 inhabitants, situated on an island of the same name. Here we find a so-called Latin school, a teachers' seminary, an ethnographical museum, and a museum of natural history. It is an important shipping port for the products of the Lofoden Islands, and its chief exports are dried cod, salt herring, spawn (which is used as

bait in the French and Spanish sardine fisheries), some skins and furs, and train-oil.

THE LAPPS OR ABORIGINES.

Not far from the city is a camp of Lapps, or Aborigines as they might be called, they being no doubt the descendants of the first race of people who had inhabited the Scandinavian peninsula, and who were driven into their present northern quarters by the Teutons, who gradually took possession of their country. There are at present about 18,000 Lapps in Norway, of which the greater number are fixed or settled, while about 2,000 still maintain a nomadic life with their herds of reindeer. Locally there is a distinction made between the fixed or fishing Lapps and the nomadic, but there is no real difference between them save such as would unavoidably arise from their different modes of life. Originally they were one race and class, but as the reindeer constitutes the only wealth of the Lapp and supplies his daily wants, the poor families were obliged to turn to fishing and fixed abodes, where they still live in all the squalor and primitiveness of their fathers, occupying dirt or turf huts, dressing in skins, cooking their food over open fires, and sleeping on furs or blankets. As a race they are not unlike our Indians, though they are smaller and even less intelligent, but they are as great lovers of strong drink as our own red-skins, and after a visit of travelers to their camp who buy the Lapp articles they offer for sale, the whole company of men, women, and children are frequently seen drunk on the streets in Tromsoe.

RICHNESS OF VEGETATION.

A great source of surprise to the traveler here is the comparative richness of the vegetation. On the journey from Throndhjem to Tromsoe we noticed the dwarfed trees and the absence of forests, while here, about 70° north latitude, far north of the line of Iceland and Central Alaska, we find bright waving forests of well-grown ash, birch, and pine. Indeed, the luxuriance of the birch forests in the vicinity of Tromsoe, is most remarkable. Other vegetation is also well developed, and as we stand on the borders of a small lake from which the town of Tromsoe is supplied with water, looking out over its surface, with the woodlands on the opposite bank, the bright waters of the fjor ' seen through the openings and the snow-capped cliffs and headlands in the background, we have a view which all the romantic beauties of Tyrol, Switzerland, and Italy cannot surpass. Imagine it in summer, illuminated by the midnight sun!

THE ARCTIC FLOTILLA.

In the extreme north of Norway is found an extensive Arctic flotilla, ships which prosecute their search for whales, seals, and fish even to the coasts of Spitzbergen and Nova Zembla. Neat, compact, powerful vessels they are, sometimes of iron, with steam-power, made for short cruises after whales in the waters of the vicinity. Some of them are of wood, rigged as sailers, with steam auxiliary and a screw propeller set in a frame so that it may be hoisted out of the water when not in use or lowered into position with little or no trouble upon the failure of the wind at an important point or at the beginning of a chase for a whale. The length of the voyages made by these, together with the small room which can be afforded for the storage

of coal, all possible space being required for the blubber wells or vats, make the use of steam impracticable, save on occasions of great importance.

HARPOON GUN.

One feature of many of the whaling vessels, and one which attracts the greatest interest, is the harpoon gun, an implement invented some years ago by Mr. Svend Foyn, a retired captain, whose name is known in whaling circles the world over. It was this invention which first made possible the capture of the larger and more powerful species of whale, an animal formerly shunned by all boats which did not care to be sent to the bottom at once. The gun or cannon, when used, is fixed to the vessel itself, such vessels as carry it having neither bowsprit nor jib-stay. A clear, roomy platform extends well out over the bow in order to give the gunner full swing to all sides. Above the center of this the gun is fixed on a ball and socket or universal swivel, which allows it free and easy play, while, being furnished with a pistol grip, the gunner has full and rapid command of it. In front of the platform a shelf of iron, having a somewhat downward slant, is hinged for the support of the strong line coiled in such a manner as to permit it to pay out with the least resistance or chance of entanglement. In stormy weather this coil is taken inboard and the iron shelf turned up in front of the gun as a sort of protection. The harpoon used is entirely of iron, the shaft being spread and flattened at the inner end to fit the bore of the gun. About two-thirds of the way down the shaft is a grommet, to which the line is attached, playing lengthwise in a slot and bound before firing, at its lower end, together with the ends of the hinged barbs, which are folded back along the shaft in resistance to the springs, which tend to keep them expanded. In the outer end of the harpoon a bored cavity is filled with a piece of rubber tubing inclosing a small glass test tube filled with an acid explosive, while to the end of the whole is screwed a sharp conical metal shell containing the explosive charge which causes death to the whale. The charge used in discharging the harpoon is common gunpowder, put up in bags the size of a base-ball, this being fired by various devices in the shape of hammers and caps or quills filled with fulminating powder and touched off by the jerk of a string. The one great drawback of this apparatus is the length of time required to prepare it for action, nothing less than half an hour sufficing to get it into trim between one shot and another, so that in case of a miss much valuable time and often a good shot or two are lost, circumstances which too often mean one, two, or three days' more cruising without sight of another whale. The range of the gun, owing to the small charge, the heavy projectile, and the resistance offered by the line, is not great—say what is ordinarily known as a pistol shot.

While cruising the gunner remains aloft in the "crow's-nest" or barrel fastened to the maintop-mast as a lookout. Immediately upon the cry, "There she blows," or "A school in sight," he descends, takes his position at the gun, the steamer is headed round and the chase begins, during which the gunner remains at his post for hours, only snatching what food he can, brought by the steward. At night steam is let down and the vessel drifts with the waves, but as long as daylight lasts the gunner stands alert at his post. On the approach of the steamer, the whale, now sounding, now blowing, comes sporting about its bows, but once within range the gunner jerks his

weapon round quickly and fires, and in an instant the strong harpoon is fast in the animal's back or side—that is, always providing the apparatus does not snap or miss fire, or the harpoon does not fall short or long. Immediately the leviathan "sounds," and the line rattles from the coil at a terrible rate until having gone far enough down the whale again rises to the surface, where he may get to the end of his rope, or the line may have been slackened from the ship. In either case the first strain on the line breaks the frail bindings which hold the grommet and the end of the barbs, and these latter, forced apart by their springs, meet at their lower ends, which project slightly beyond their pivots, in such a manner as to pinch and crush the glass tube in the end cavity, thus forcing the acid into contact with the rubber and exploding the charge contained in the conical shell or cap at the end. Should this explosive not prove fatal to the animal, the whale may tow the vessel at a fearful speed for miles into the sea, but sometimes a boat is sent out to lance him, and in course of time he is himself towing alongside the steamer, tail foremost, minus his fins, on the way to one of the numerous oil-refineries and guano factories along the coast.

LOFODEN FISHERIES.

The Lofoden district is the scene of the principal industries of Norway. It has the same significance for that country and the north of Europe as Newfoundland has for America. Perhaps some idea of its importance can be formed from the statement that of the annual native exports from Norway, amounting during the fifteen years 1870–'85 to a yearly value of $26,400,000, or about 100,000,000 kroner, the products of the fisheries formed nearly one-fourth, cod and its allied products coming in for nearly $4,000,000 of this, with over half of this sum again to be credited to the Lofoden cod.

In 1848 five hundred fishermen were engaged in these waters, while now the number reaches fully thirty thousand, and it is estimated that the wear and tear of oiled clothing alone used in the three months' season represents the sum of $60,000.

Agriculture or stock-raising can not be pursued to any great extent in these islands, but the rich fishing in their vicinity more than makes up for this lack. The islands are sparsely inhabited, but during the fishing season men flock thither from all parts of northern and central Norway to engage in the catch or to barter with the fishermen, some of whom own houses at some of the stations, while others, and by far the greater part, rent quarters of the companies who keep supplies for the fishermen and buy their fish. These fishermen live very much as our lumbermen do in the pineries of northern Wisconsin and Michigan, though they get nothing like the good quarters and wholesome food furnished there.

WAGES OF FISHERMEN.

The earnings of these men for three months' hard work, always exposed to great danger, would, to an American, be insignificant, $50 being the average gain of a good man in a fair season. In these transitory colonies, where thousands of men congregate, crime and disorder are exceedingly rare, a fact which is credited to the scarcity of brandy and intoxicating drinks, it being almost impossible for the fishermen to secure strong drinks.

The large triangular fjord or bay is inclosed on two sides by the broken coast of the main-land, and the succession of islands opens to the southwest and is about 60 miles wide at its mouth by the same distance in length. The bottom slants downward and from both sides until it reaches a deep medial furrow which runs the whole length of the fjord, gradually rising as it extends inward toward its end.

A singular circumstance in connection with this is that the cod which visit the fjord in myriads every year, from January until April, for the purpose of spawning, always stay on the left or island side of this furrow or central line, none having ever been caught on the land side. The reason for this has never been satisfactorily explained, but it is believed that the shape of the bottom on the island side offers more favorable conditions for the deposition of the spawn, while a reason for the coming of the cod to the fjord at all might possibly be sought in the temperature of the water.

NUMBER OF FISH CAUGHT.

So far as known the numbers of fish coming into the fjord is practically the same each year, the catch depending almost entirely on the condition of the market.

As a demonstration of this it may be mentioned that in Ostnesfjord (a narrow arm of the sea 1¾ miles long by 1¼ miles wide), a sheltered quiet sheet, the catch this year amounted to about 18,000,000 cod, while the total catch of all the other waters of the district together, owing to the unusual storminess of the weather, amounted to only 13,000,000. It must however be added that the fish rarely come as far up as the Ostnesfjord, the last time heretofore being in 1868. As soon as the cod is through spawning it disappears—where to is not known, but it is supposed to some point not far out in the sea. The number of cod caught during the several years from 1876 to 1887 inclusive, were respectively as follows:

1876	23,000,000
1877	29,000,000
1878	26,000,000
1879	25,000,000
1880	27,000,000
1881	28,000,000
1882	29,000,000
1883	17,000,000
1884	17,000,000
1885	27,000,000
1886	31,000,000
1887	31,000,000

PRICES OF COD.

Prices paid for the cod vary greatly, in accordance with the prospects for a good or bad season. In 1879 the price was 18 kroner ($4.80) per 100 fish, varying from this through the following years down to 13 kroner ($3.44) in 1880, and up to 24 kroner ($6.44) in 1885. This season the prevailing price was about 12 kroner ($3.17).

TACKLE USED.

The tackle used in catching cod is of three kinds—nets, long lines or trimmers, and hand-lines. The net is said to have been intro-

duced into the Norwegian fisheries in 1685, by one Klaus Nielsen, of Burgund, to whom, fifty years ago, a monument was erected in the vicinity of Aalesund by his "grateful fellow-men." The nets in use here vary somewhat from those used on the Newfoundland banks. While the latter are from 40 to 80 fathoms long by 3 to 4 fathoms deep, with a mesh of 110 to 117 millimeters, the former are not more than 18 to 20 fathoms long, 2 fathoms deep, and have a mesh of from 80 to 90 millimeters. This difference is occasioned by the fact that the Lofoden cod is, on the average, not more than one-half as large as the Newfoundland fish, its length varying from 75 to 95 millimeters, and its weight from 3½ to 6 kilograms, measurement and weight both referring to whole fish.

The nature of the ocean currents, too, precludes the use of deep nets. Still there is some varying, and in East Lofoden, where the currents are less powerful, nets are found as much as 4 fathoms wide, or deep. In all the districts it is customary to tie 20 or 30 nets together lengthwise, and plant them near the bottom of the sea, for if placed higher they drift and are lost in the currents. As sinkers on the lower edge stones are still used, but the hollow balls of thick glass, covered with a net-work of string, so generally introduced in all fishing communities, have also here taken the place of the cork floats, and are fastened to the upper edge of the net.

The long line, or "trimmer," consists of a line of from 500 to 700 feet in length, anchored by means of stones, and with wooden buoys at both ends, and furnished with hooks suspended from it by short smaller lines 4 or 6 feet apart. As a rule, 24 such lines are tended by one boat. The hooks used are confessedly inferior to the American hook. The latter is not unknown in Lofoden, but the characteristic conservatism, or stubborn resistance, of the Norwegian fishermen against innovations of every kind makes it almost impossible to inaugurate reforms in this, as well as in many other notable instances. In order to ascertain at what depth the masses of fish are found, so that the trimmers may be planted higher or lower in the water accordingly, a single trimmer is placed in a slanting direction from the bottom to the surface, and the part of this line which catches the greatest number of fish denotes the depth desired, upon which the other lines are set horizontally.

BAIT USED.

The bait consists chiefly of herring, fresh when attainable, otherwise salted. A better bait by far is found in the cuttle-fish, or squid, or mussels, but the scarcity of these prevents their general use. The most effective tackle for amateurs used in these waters is the hand-line, a long, stout line, furnished with a slung hook, having a glittering metal fish molded on its shank and kept rapidly jerking up and down in the water at the supposed right depth. The cod, being attracted by the shining of the lure bait, collect about it, and either bite or are hooked by the body, head, or tail. In this manner I caught several cod while the steamer remained in Ostnesfjord.

BOATS USED.

In the matter of boats Lofoden stands to-day far behind the times, no important improvement or change having been made for years or even centuries. The boats of to-day are large, open row-boats, built upon about the same model as the viking ships of centuries ago, and

generally furnished with a square sail. On the keels iron handles are sometimes fastened to give the crew a better hold in case of an upset, but in the absence of these the men when capsized drive their belt-knives into the keel or bottom of the boat, and these they hold fast to until they are picked up or until they can right their shell and bail her out. Too often, however, boats drive ashore, bottom up, after a storm, and the number of knives sticking in their keel denote about the number of unfortunates who have found watery graves.

Though small, these boats prove themselves well adapted to the wants of the men; that is, they are easy rowers, an important circumstance, since the men may not remain out over night, and consequently they must often be rowed a distance of 24 miles in a single day. This the boats are capable of without over-exertion to the crew. Moreover, they are good sailers, and above all they are excellent heavy-weather boats, a matter of no small importance, for the storms they frequently encounter are most terrific. Their graceful shape, too, make them dear to the heart of their crews, and perhaps this as much as anything else has contributed to defeat the efforts which have been made to introduce decked vessels or larger boats of foreign pattern. These boats are all of the same model but may be roughly divided into three classes, according to size. The largest are from 36 to 40 feet long, 9 to 10 feet beam, and draw about 3 feet of water. They are usually furnished with 12 oars and a mast 24 feet high, carrying a square sail. They are used exclusively by the netmen and are usually manned by a crew of seven. The middle size, used by the "trimmer-men," is somewhat smaller, and is designed for a crew of four to five men, while the smallest size boats are used only by hand-liners, with two or occasionally three men in a boat.

PRODUCTS OF THE FISHERIES.

From these cod-fisheries four products are put upon the market: (1) Fresh or salt dried cod; (2) oil, of several grades and qualities; (3) spawn; (4) guano.

Of the first of these it may safely be said that neither the process of preparation nor the prepared fish itself could bear any comparison with the American process or product.

PREPARING THE FISH.

On the way home from the fishing grounds each night, when the sails can be used and the men are free, the day's catch is immediately prepared. The head is removed and saved. Then an incision is made near the tail of the fish in order to let the blood out. The liver and spawn are saved in holders brought especially for the purpose, and the entrails are cast into the sea. The fish designed for drying without salt are now tied together by the tails, two by two, without washing, and hung over racks on shore, where they remain drying in the sun until June 12, it being forbidden by law to take any of them down sooner, as many of the men live at great distances from the drying grounds, and in the absence of the law mentioned the temptation to appropriate other men's property was found to be too strong for the first comers to resist. The fish to be salted are usually sold to small smacks, which are sent by merchants of the cities lying further south to cruise and buy them up. In these ves-

sels the cod are salted in layers in the hold. After being opened to the backbone along the whole length of the belly, the bone is removed to the third joint, opposite the navel. The fish receives no washing under this process, even though it is a well-known fact that a little care in this direction would give the finished cod a much better appearance. After completing a load the smacks depart for the small islands lying outside the cities of Throndhjem, Aalesund, Christiansund, and Molde, where the fish are alternately piled in stacks to press the moisture out of them, and then spread on cobblestone pavements or the natural rocks to dry in the sun until ready for export.

FISH OIL.

Oil occupies by no means an insignificant position among the products of Lofoden, though in amount it varies through the several years far more the other cod products. From 1876 to 1880 the production averaged 45,000 hectoliters per year, while in 1883 not more than 8,000 hectoliters were secured, and in 1886, 35,000. The value of the product also varies, according to quality and the amount produced, from 25 kroner ($6.66) to 350 kroner ($93.33) per barrel. The preparation of the oil is carried on partly at factories and partly as a sort of domestic industry. The liver saved, as before stated, is sometimes sold to the local factories and sometimes collected in barrels which, at the end of the season, the fisherman takes to his home in order to prepare their contents. In this way the livers often stand many weeks, and upon their arrival a certain quantity of their oil has already been freed by the rotting of some of the liver cells. This is poured off, and then, by repeated boilings over open fires, the rest of the oil is boiled out. In this way four sorts of oil are obtained—raw medicinal, clear (yellow), partly clear (light brown), and refuse or train (brown).

The livers sold to the factories are treated in other ways, and from them is obtained the now well-known product which is sold as steam-refined cod-liver oil. As much of this is exported to America, where it is admitted to be superior to the Newfoundland oil, I took pains to ascertain the process by which it is prepared, and for this purpose I visited the celebrated factory at Stamsund established by the late Peter Möller. Here I was well received by the present owner, the son of Peter Möller, who gave me every facility for seeing his works and assisted me in getting a clear description of his method of preparation, laying special stress upon the fact that there was no secret connected with the process. His own success, he claimed, was due chiefly to a careful selection of the livers and a scrupulous cleanliness at every stage and point of treatment. The very first requirement for the production of a good article of oil is that the liver be of the best sort and perfectly fresh. The fish from which it is taken should have been caught the same day as the boiling is done. When care is observed, and if the thermometer be under the freezing point, the liver may also be used the day following the catch.

After being most carefully sorted, the sick livers being known by their greenish tinge, and lean, scanty ones by a red or often nearly black color (both of these to be unhesitatingly thrown out), the livers, with the gall-bladders removed, are well washed and then tried out by one of three processes. The first of these is used in many of the refineries, as the capital required for a plant is not great and the oil

obtained may be excellent, if sufficient care be observed in its preparation. In this process the principle is simply even heating of the raw material in water baths.

The second method, used in the factory I visited, and which I myself witnessed, consists in gradually heating the livers in iron kettles about and under which steam is circulated freely, the temperature being automatically regulated by ventilators.

The third method is the most rapid, simple, and cheap of all, and is mostly used on board vessels which are sent to Lofoden for the sole purpose of trying out oil. It consists of freeing steam under some pressure directly into the mass of livers, which heated, rapidly give up their oil. After being obtained by any of these processes and poured off, the oil is cooled more or less, and during a longer or shorter time, during which treatment the stearine separates itself in a ratio proportionate to the degree of cold and the time cooled.

The better sort are kept for a long time at a temperature not above zero C., and are then pressed in cold rooms, filtered, and bottled. If all the oils prepared by either of the first two of these methods are not equally good and clear the reason lies in the fact that the process has not been conscientiously followed and not in any secret of preparation. The fault generally lies in the choice of the livers. Strong competition often makes it unprofitable to discard large masses of raw material simply because it is somewhat old or tainted, especially when it is known that the resulting oil can not be recognized until after the lapse of some time.

By the third process of trying out the oil—that is, by rapid and high heating of the livers through direct contact with the superheated steam—more oil is obtained, but of a far inferior quality, as it quickly acquires a disagreeable taste, and can be detected by its appearance a short time after preparation. Long experience and extensive experiments at the better factories have demonstrated that the oil should never be heated above 70° C. Oil which has been subjected to a higher temperature oxidizes on contact with the air the more rapidly the higher the temperature it has reached. How far the separation of the stearine is of any gain or loss from a therapeutic stand-point is still an open question, but the demand of the public that the oil shall remain clear, even in cold weather, makes the present process necessary. In respect to the amount of stearine contained, there is a great difference between the Lofoden and the Newfoundland oils. While the former yields from 10 to 15 per cent. of its bulk in stearine at a temperature zero C., the latter, under the same conditions, never gives more than 5 or 6 per cent.

The last filtering of the oil can not be done too carefully, as there are always minute particles of liver cells held so finely in suspension that only the most painstaking filtering can remove them. At first they are invisible, but they collect, and later show themselves as a sediment at the bottom of the bottle or vessel in which the oil is preserved.

As to the difference in quality between the American and Norwegian cod-liver oil, I think I am safe in saying, as may in fact be seen from the statements already made, that it arises chiefly from the different circumstances under which the fishing is carried on.

At Lofoden the boats used are small and open, and the circumstances require that they shall be ashore every night, and thus the factories can obtain the livers of each day's catch when not mors than a few hours old. On the other hand, the fishing on our coaste

is carried on in decked vessels, fitted for long cruises, touching shore only at long intervals, so that by the time the livers can get to the factories they are old or partly putrefied. To remedy this, and thus bring the large American trade in cod-liver oil mainly or wholly into American hands, I would suggest that our oil refiners send out clean, nicely-fitted steam refining vessels, which should cruise the fishing-grounds, buy the livers fresh from the fishing smacks, and try out the oil on the spot and in the manner above described. This plan is thought perfectly practicable by several persons largely interested in the Lofoden industry with whom I have talked. I consulted Dr. F. P. Möller, whose father, Peter Möller, was the first to produce steam-refined cod-liver oil about thirty years ago, about this proposition, and he admitted that if adopted it would be of no small advantage to our American fishermen.

To Dr. F. P. Möller I am largely indebted for the detailed description of the methods and processes of producing medicinal cod-liver oil. As the American coasts produce such an abundance of cod, it would seem to me that by the plan suggested we might ourselves produce all the cod-liver oil for our own consumption and even compete in the European and other foreign markets.

FISH SPAWN.

The spawn at Lofoden is usually saved and salted in loose barrels in such a manner that the brine is allowed to leak slowly away, thus leaving the product dry and ready for shipment to the French sardine fisheries. The spawn of the first of the season is the best, as later on it becomes looser and disconnected and forms an inferior article. Prices vary from 12 to 24 kroner ($3 to $6) per barrel, and the quantity exported averages from 30,000 to 40,000 barrels yearly. In the American fisheries, I am told, no sufficient quantity of spawn is obtained to make this industry of any importance.

FISH GUANO.

Formerly all refuse of the fisheries was thrown into the sea, but of late years factories have been established which buy it up and manufacture it into an excellent fertilizer under this name of fish guano. In the preparation of this are used all the fish-heads, the part of the backbone which is removed from the salted cod, the boiled livers from the oil factories, large quantities of herring, and the blood of the cod and the codfish oil having first been obtained from the two latter by hydraulic pressure. These materials are dried, sometimes in the open air and sometimes by the aid of artificial heat, after which they are ground in specially constructed mills, and put upon the market in casks, sometimes with the addition of potash or mineral earths, which enhance its value as a fertilizer. The average production of this article at Lofoden during the last five years has amounted to about 33,000 sacks of 100 kilos each, into the total of which has gone, among other things, about 12,000,000 fish-heads. This industry is at present suffering under depression, and owing to a stagnant market and low prices several of these fisheries have suspended during the last three years.

At my request, Mr. Fr. Wellem, chief of the Norwegian Government fish commission, has prepared an exhaustive paper on the methods, tackle, and customs in use among the Lofoden fishermen—

a paper so full, clear, and authoritative that I shall, as soon as I can get it ready, send you a translation thereof in its entirety, knowing that it can not but be of interest to those engaged in the fishing industry of our coasts.

R. B. ANDERSON.
Consul-General.

UNITED STATES CONSULATE GENERAL,
Copenhagen, October 11, 1887.

MARKET FOR AMERICAN WARES IN DENMARK AND SCANDINAVIA.

REPORT OF CONSUL-GENERAL ANDERSON.

With a view of enlarging the markets for our various products and manufactures in Scandinavia, I have made some inquiries among business men as to what American products find their way or might be brought into Danish (or Scandinavian) markets. Some time ago I applied to Mr. L. C. Petersen, of Copenhagen, a gentleman who has for several years been engaged in business in New York, and who is now general agent for the Thingvalla Steamship Line, plying between Copenhagen and New York, for a list of American products and manufactures likely to find a market in Scandinavia, and he kindly furnished me the following list, compiled mainly from the freight books of the transportation company which he represents:

AMERICAN PRODUCTS LIKELY TO FIND A MARKET.

(1) Petroleum.
(2) Wheat and corn.
(3) All kinds of mechanics' tools.
(4) Machines for working in metal and stone.
(5) Machines for the production and application of electricity.
(6) Railway plant, rolling stock, and apparatus.
(7) Chemical preparations.
(8) Lard and lubricating oils.
(9) Stoves and cooking and laundry utensils.
(10) Weapons and sporting outfits.
(11) Surgical and dental instruments.
(12) Pharmaceutical apparatus.
(13) India-rubber goods.
(14) Carriages, cradles, velocipedes, baby carriages, etc.
(15) Agricultural implements, machines, and tools.
(16) Clocks and watches.
(17) Weights and measures, scales, balances, etc.
(18) Optical, surveying, and astronomical instruments.
(19) Pianos, organs, and other musical instruments.
(20) Tobacco, especially seed leaf.
(21) Choice furs.
(22) Canned goods, fish, oysters, clams, meats, vegetables, fruits, etc.
(23) Cotton, hemp, flax, wool, and raw silk.
(24) Butter, cheese, pork, and meats.
(25) California wines.
(26) Minerals and stones.
(27) Curiosities and toys.

This list, I think, covers pretty well the American export to Denmark.

PETROLEUM.

The list is of course headed with petroleum, wheat, and corn, and these articles have, until within a few years, been well nigh unobtainable from other sources, so that we have found an easy outlet for these products, with which we are so richly supplied. In petroleum alone the import into Denmark from America in 1886 was

131,000 barrels, as reported in a former dispatch. As reported in the same dispatch, a bill is to be introduced by His Majesty's ministry in the coming session of the Rigsdag providing for a change in the petroleum test. This bill, I understand, the American dealers look upon as menacing to their interests. If passed in its present form they claim that it will injure the trade in American petroleum in favor of the confessedly inferior Russian product. The bill might, however, be so amended as to exclude all but "water-white" petroleum. That would give the two oils an equal chance, in which case the American product would henceforth, as hitherto, easily hold its own. Of wheat and corn the United States is still the only source of foreign supply, though we may look for active competition in the case of the former from the fields of the Orient.

LARD AND OLEOMARGARINE.

Lard and oleomargarine have formed large factors among the Scandinavian imports from America, but in Denmark the latter is rapidly being replaced by an article of home manufacture, under the name of "butterine" (kansterdor), and is labeled "margarine."

COTTON GOODS.

Our plain cotton goods lead the market, and the demand for them is extensive and steady. A merchant informed me that the United States supplies the best and cheapest swan's down, but our calicoes, and also our woolen goods, are considered to be inferior, and are not therefore able to compete with the products of the German and English looms.

CANNED GOODS.

The market in canned oysters, fish, meats, fruits, etc., is largely supplied by American industry, but such articles are upon the whole too expensive to admit of any extensive use in the daily life of the Scandinavian.

TOBACCO.

American tobacco is very extensively used in these countries, at prices ranging far below those current in the United States; but it must divide the market with Holland and Russian products. In the case of seed leaf the American has a decided advantage.

IRON AND STEEL.

In iron and steel manufactures certain articles are very popular, and we are gradually gaining a footing in competition with England, Germany, and Sweden. Many of our agricultural implements and machines are greatly preferred, as they are more practical and time-saving; but, as a rule, their price places them beyond the reach of the average farmer, and he either buys the cheaper article made in England or Germany or contents himself with the methods of his fathers. German and Danish plows, pulverizers, and rollers are generally seen upon the farms or by the wayside, and the demand for farm engines and thrashing-machines, reapers, mowers, etc., is supplied from England, while American farming tools, such as spades, rakes, hoes, forks, and the like, are found in the stores of all dealers

in such articles. Mechanics' tools and machines for working in metal, stone, and wood are often imported from the United States; also machines and apparatus for the production or application of electricity, though the latter are largely supplied by home manufacture or from the German markets.

American railway plant, rolling stock, and apparatus might, I should think, if the proper effort were made by the manufacturers, be introduced into Scandinavia. The present supply is mainly from Germany. The street cars of Denmark are made here. A few of our chemical preparations find their way here, but the list can doubtless be largely extended. Several extensive guano factories in Denmark obtain, I am told, much of the raw material from the phosphate beds of North Carolina.

The heating, cooking, and laundry apparatus and utensils in Scandinavia seem to be very primitive and clumsy, and in this field there is no doubt a golden opportunity for American manufacturers with the necessary energy.

WEAPONS AND SPORTING GOODS.

Weapons and sporting accouterments of American make are confessedly equal if not superior to the articles supplied by England and Germany, but their cost is too great. The European products are much cheaper. The smaller fire-arms used by the army and navy American industry might, I should think, supply.

The matter certainly deserves consideration on the part of our large manufacturers.

BANK-NOTES AND POSTAGE-STAMPS.

It is also obvious that the Scandinavian countries might find in America better bank-notes and postage-stamps. Indeed, some of the Swedish bank-notes are made in the United States.

DENTAL INSTRUMENTS.

The superiority of American dental instruments is admitted in Scandinavia, and the demand for these as well as for some surgical instruments and pharmaceutical wares is now supplied from our factories.

INDIA RUBBER.

To a limited extent India-rubber goods are supplied from America.

VEHICLES.

Vehicles of our make are seen on Scandinavian streets or roads, but here seems to be a large field for American enterprise. The American product is not dearer and far surpasses the European in grace, strength, and comfort. Certainly the hickory might be introduced with advantage.

CLOCKS AND WATCHES.

American clocks and watches are slowly gaining a market here as elsewhere, as are also a few optical, astronomical, and surveying instruments.

PARLOR ORGANS.

The demand for parlor organs is almost entirely supplied from American workshops, and by some effort might be largely increased.

SEWING-MACHINES.

The sewing-machines to be found in the stores here are largely manufactured in Germany. Upon the whole, I can safely say that American manufactures are generally regarded as the best and the faith in them with the corresponding demand for them is steadily improving. The public have formed the habit of looking for new and practical inventions from America, and with a direct line of steamers between New York and Scandinavia our exporters might easily extend their connections in this part of the world with advantage to themselves and satisfaction to their new customers.

R. B. ANDERSON,
Consul-General.

CONSULATE GENERAL OF UNITED STATES,
Copenhagen, September 27, 1887.

DANISH PETROLEUM BILL.

Minister Anderson, under date of September 13, 1887, transmits the following:

I send herewith a copy of the petroleum bill now pending in the Danish Legislature, together with the Government's remarks thereon. I also inclose a complete translation of these documents.

[Translation.]

A bill to regulate the trade in petroleum, etc.

[Introduced in the Danish Legislature by the ministry of section 1, justice.]

Petroleum which under the test prescribed in section 2, in an atmosphere represented by a barometer height of 760 millimeters, gives off ignitible vapors at a temperature lower than 23° Celsius, shall not be sold for use in quantities less than the minimum prescribed for its sale at wholesale.

In larger quantities it shall only be sold in packages plainly marked with the word "explosive" in letters proportionate to the size of the package.

SEC. 2. The temperature at which petroleum first gives off ignitible vapors shall be determined by tests in the so-called "Abel's apparatus."

By a special ordinance rules will be given for the making of these tests, and a ratio fixed for the raising or lowering of the temperature spoken of in section 1, according as the barometer is below or above 760 millimeters.

SEC. 3. The provisions of section 1, second part, apply also to naphtha and benzine as well as to other products obtained from petroleum by distillation which, under the test mentioned in section 1, give off ignitible vapors at a temperature less than 23° Celsius. When sold for use in quantities less than the minimum prescribed for their sale at wholesale, their packages, beside being marked as above, shall bear in legible letters the words "Must not be brought near an open light." * * * The provisions of this paragraph may, by special ordinance, be extended so as to include other liquid hydrocarbons.

SEC. 4. Infringements of this law or its relative ordinances are, providing heavier punishments are not administered under the provisions of the penal law, punishable by fines of from 10 to 200 kroner, all cases of infringement to be treated as public police cases.

Persons accused of infringement of this law shall, when tests in connection with the case are to be made under police inspection, be given due notice to be present at the same.

SEC. 5. This law, which does not apply to the Faroe Islands, goes into effect three months after its publication in the "Law Tidings" (Lovtidenden).

From the same time the "law governing the trade in petroleum and other illuminating liquids" of November 12, 1870, is repealed.

Bill. Regular session, 1886–'87 (2).

Government remarks on the preceding bill.

By a law of November 26, 1870, section 1, it is ordained that petroleum and other illuminating liquids giving off ignitible vapors at a temperature lower than 40° Celsius shall, under a fine of from 20 to 200 rigsdalers, be not sold for use except in holders which, in legible letters proportionate to the holder's size, shall be marked with the word "Dangerous" (Farlig).

In conformity with this paragraph's second part, there are, by a royal ordinance of September 4, 1871 (see the proclamation of September 8, that year), given rules for the construction of that apparatus with which tests of the temperature at which petroleum and other illuminating liquids give off ignitible vapors are to be made, as are also rules for the making of such tests.

In the years which have elapsed since this law was passed, the use of petroleum as an illuminating agent has, as is well known, greatly increased.

At the same time its production has, of course, kept pace; but, inasmuch as the raw petroleum, besides the illuminating oil proper (kerosene), contains a very considerable quantity—as high as 45 per cent.—of other oils which are of a comparatively low value, attempts have been made to mix these with the illuminating oil, thus producing an article of much greater ignitibility, and therefor far more dangerous than the unadulterated oil.

As a natural consequence of this the attention of the authorities in the various countries has steadily been devoted toward the passing of such regulations as would secure consumers against these dangers, and experience has of late years led to the passage of new laws governing the trade in petroleum and similar explosive liquids in several countries, among them both of our neighbors, Germany (1882) and Sweden (1885).

Now, as the tests upon which these newer laws are based have shown that the laws in force with us do not insure sufficient security, the ministry, whose attention was called to the matter by a lecture given before the Insurance Companies' Union, required an opinion in the matter from the Polytechnic Institute, and in pursuance of the explanation and the recommendations therein made, have deemed it necessary to propose radical changes in the present legislation upon the subject, looking toward the establishment of greater security against the dangers arising from the use of petroleum and its relative oils, as well as more perfect agreement with similar legislation in our nearest neighboring countries.

The law of November 26, 1870, in fixing the "test" of petroleum at 40° C. had reference to the open apparatus then in use for testing; but later experiments have demonstrated that no open apparatus can give sufficiently reliable results, and least of all the one there authorized.

This tester far from satisfies the demands made upon it to-day, (1) because it does not give results which agree with each other, inasmuch as tests with the same oil can often vary as much as 3° C., and even this exactness can only be attained after considerable experience; (2) because the law fixes 40° as the lowest limit for the ignition of the vapors, while oil that scarcely satisfies tests which in reality demonstrate a safe article show a temperature of 53°, so that a dealer whose object was alone his pecuniary advantage might, without breach of law, import an oil of 13° lower test, which in use would prove extremely dangerous. This latter defect might easily be remedied administratively by simply ordering a few minor changes in the dimensions of the tester's various parts, but the first difficulty can only be removed by ordering the tests to be made in a closed apparatus.

This, however, cannot be accomplished unless a change be made in the legal test temperature, which in such case must be set considerably lower (21°–23° Celsius), and the Ministry of Justice has therefore, as was also advised by the Polytechnic Institute, deemed it most advisable to introduce a bill to alter the law, the more as such a step is indicated by the wish, above all, to seek the exclusion of dangerous petroleum from the retail trade, and thus from daily use.

Thus the present bill has been prepared. While ordering that tests shall be made in a certain closed apparatus it fixes the test at 23° Celsius.

In this connection it is to be remarked that the test is not fixed at the same point in the various countries. In Germany it is 21° C.; it is 22° in Sweden, and about 23° in England.

In Germany, however, there seems to be great dissatisfaction with the too low limit, inasmuch as rather poor oil can stand the test, and a movement has been set on foot, seconded by the Polytechnic Institute, to have the test raised to 23°.

As regards the testing apparatus which it is proposed to introduce, the so-called "Abel's" apparatus, it is that which is commonly regarded as the most exact and best, and is authorized by law both in Germany and Sweden, as well as being used in the United States for testing all oil destined for the English market. There can, therefore, in the opinion of the ministry, be no doubt as to the advisability of choosing it.

True, it is somewhat dearer than the Danish tester now in use; but this fact, it would seem, should prove no hinderance to its acceptance, as it is more especially designed for use in the official control where experts are appointed. For private use much cheaper apparatus might be procured, which could be used, some directly on their own merits (Doxrud's apparatus), and some after once for all having been compared with Abel's. That more detailed rules for the use of the authorized apparatus, and among them provisions for changes in the test temperature, according as the barometer varies, should be given by special ordinance, will, it is to be presumed, be deemed natural, and fully coincides with the institutions of Germany and Sweden.

Besides the already mentioned regulations as to petroleum temperature test, the bill contains, as will be noticed, a prohibition of the sale at retail of petroleum which does not satisfy the provisions of the bill.

The law of November 26, 1870, allowed, as is known, the sale at retail of such petroleum, providing its holders were marked with the word "Dangerous" (Farlig). * * * The ministry supposes, however, that the uses which can be made of such explosive petroleum in the arts are only of such nature that the act of forcing its users to buy their supplies at wholesale cannot be productive of any inconvenience, and by thus entirely excluding this product from the retail trade an advantage is undeniably gained in a much stronger guaranty that it will not be purposely or carelessly used for illuminating purposes, than if its sale at retail were allowed, even under limited conditions. Still it has been deemed most advisable to retain the above-mentioned rule as to the marking of the packages of such oil when sold at wholesale. In addition, section 3 of the bill contains provisions as to the trade in naphtha, benzine, and similar products obtained by the distillation of raw petroleum.

The reason for these liquids not being included under the same rules as petroleum, as is the case in the law of November 12, 1870, is that they naturally give off ignitible vapors at a temperature far below 23° Celsius, and at the same time, although only to a small degree used as illuminating agents, they have such varied uses in the household as would render it impossible to exclude them from the retail trade.

It is necessary, therefore, to limit restrictions in this regard to the simple maintenance of the provisions of the law of November 12, 1870, *i. e.*, that all packages of such liquids should bear a warning label.

The other provisions of the bill, which, in the main, are the same as those contained in the law of November 12, 1870, need, it is believed, no explanation.

RUSSIAN PETROLEUM IN SWEDEN.

REPORT OF CONSUL MAN.

Russian petroleum is being advertised and introduced very extensively in the market here. For some time past there have appeared daily in the newspapers advertisements in large type, offering Russian petroleum at retail at 29 öre ($0.077) per kanna (0.6915 gallons), and American petroleum at 35 öre ($0.093) per kanna, with the apparent object of attracting general attention to the lower price of the Russian oil. This makes a difference of but 6 öre or ($0.016) a kanna in favor of the Russian product, which amount, when reduced to United States currency, seems very small; but in Sweden the difference of 6 öre in purchasing a trifle over $\frac{1}{5}$ of a gallon of oil would have as much, if not considerably more, influence on a buyer

than a difference of *6 cents* on a similar quantity would have in the United States.

A storage tank of a capacity of 12,000 barrels has recently been erected on one of the small islands in the harbor below the city, and a tank steamer from Libau, Russia, has just brought and discharged a cargo of 7,000 barrels, and is now returning to Libau for a second lading. This is the first importation ever brought into this port in the above manner. This oil will be distributed through the medium of barrels collected in this locality, most of which are of American manufacture, to the obvious disadvantage of our petroleum interest. I am convinced that much of the strong-smelling oil that is already sold here as American oil never crossed the Atlantic. Although the difference in price between the two oils is slight, it would still prove a strong factor in driving the American oil—notwithstanding its acknowledged superiority—from the Swedish market, as there is probably no other country in Europe where economy is more rigidly practiced or is more necessary. In this high latitude the expense of illuminating, instead of being distributed as elsewhere, with comparative equality throughout the year, is condensed into six or seven months, when the other needs of a rigorous winter season fall with an accumulated volume upon the people.

ERNEST A. MAN,
Consul.

CONSULATE OF THE UNITED STATES,
Gothenburg, October 24, 1887.

EMIGRATION FROM AUSTRIA.

REPORT OF CONSUL GILBERT.

The consular district of Trieste embraces a large territory, described as follows: Austrian Littoral, Trieste and its territory, Istria, Göritz and Gradisca, Dalmatia and the islands of the Eastern Adriatic, Croatia, Carinthia, Carniola, part of Styria, Tyrol and Vorulberg, Fiume and its domain.

The governor of Trieste and its territory states that statistics of emigration from his district are transmitted by the several communes directly to the central commission of statistics in Vienna.

The governor from Zara, the capital of Dalmatia, replies that he is not in a position to furnish information concerning the emigration from his district to the United States, for the reason that no records of the same are kept by him, they being sent, as in the case of the Austrian Littoral, directly to the central commission in Vienna.

Similar replies have been received from other portions of this consular district, so that of the 11,946 emigrants arrived in the United States from Austria during the year 1886 this consulate can account but for few.

From the inland provinces the agricultural class; from the coast, especially Dalmatia, the sea-faring, and such as through their influence follow them. It is well known that Dalmatia may be called a nursery of seamen and produces the finest recruits both for the Austrian naval and mercantile service. A large number of these men found themselves in Californian ports in the first years after the gold discoveries, and, leaving their ships, took their chances in the mines, in very many cases with success.

From this beginning a very considerable amount of emigration has arisen and has extended, especially among the wine and fruit growers. Emigration of mechanics is very limited; larger, in proportion to their numbers, is that of Jew traders and merchants, many of whom, however, after remaining long enough in the United States to become citizens and acquire a thorough knowledge of American business, return to reap the advantages both of their knowledge and of their American citizenship.

CAUSES OF THE EMIGRATION.

Thus far, from this district, there appears in general no other cause than the common desire and hope of bettering their condition. Strikes are unknown, and the compulsory military service has, as yet, produced little effect. Overpopulation is not yet a cause of much importance.

SOCIAL CONDITION.

That the emigration from the provinces included in this consular district is so limited is, curiously enough, the result of the social condition of the people, speaking, of course, of the country in contradistinction to Trieste and the few larger towns.

The peasants are, as a rule, small land proprietors, devoting themselves to agriculture, including wine production in favorable positions, and forestry in the highlands. They dwell in substantially built cottages, very commonly of rough stone, plastered, and neatly whitewashed, small, and not very well ventilated; but this is of little moment to people spending most of their time in the fields and whose aim is warmth in the winter. Schools are universal and the knowledge of reading and writing is very generally diffused. Bread and vegetables are the principal diet, maize and pork playing, however, an important part, as in the infant settlements in the United States. They are frugal, industrious, and thrifty, capable of performing manual labor of the hardest kind. In summer coarse linen, in winter thick, coarse woolen garments are their dress, and in some districts overcoats of sheepskins with the wool form a superior protection against the cold. Their marriages do not appear to be very prolific, whatever the cause may be, and illegitimate children, it seems, are very few. Formerly here, as in all Europe, the population was kept down by the ravages of war, but for fifty years past it has been slowly increasing.

Before the days of steam, men were employed in large numbers in transportation and the people had little or no incitement to seek their fortunes away from home, their small farms sufficing for a comfortable subsistence and the villages absorbing any surplus population, as mechanics and laborers. Since the opening of railroads the men employed in transportation have, of course, in a measure, lost their vocation, but the great development of manufacturing industry, especially in iron and steel, has absorbed all surplus labor, and to such an extent that in time of harvest Italians in large numbers find temporary employment.

The compulsory military service has worked somewhat unexpectedly in the matter of emigration. True, in the cities and large places, here and there, parents have sought to rescue their children by sending them abroad, but the number is so small as to be of no

importance in our tables of statistics. Up to the present time the withdrawal for three years of so many able-bodied young men from the farms and workshops has given the rest still more constant employment, and thus, in effect, has checked emigration. That this will long continue is not to be expected; but just now it is the fact.

It is true that the peasants, as a rule, are poor, but absolute pauperism is not extensive. Even in the city of Trieste, for instance, it is less in proportion to the population than in many an English town. How long these remarks will continue to be true is a question; for the oppression of constantly increasing taxation begins to be severely felt. It is rarely possible for the Corinthian or Illyrian peasant to lay by a surplus for the future, and Istria, from its limited supply of water and frequent droughts, hardly "holds its own." Here one sees few new houses away from the pretty little cities and towns along its coast; but in the inland provinces they are not infrequent. There is some emigration to the countries lying east from all the provinces; but I see no reason to think that for the present there will be any great increase of that to the United States.

Deportation of paupers and insane "assisted emigrants," and the like, whether by Government or communal aid, is, to the credit of the Imperial authority, utterly unknown.

The attitude of the Government toward emigration, so far as can be judged by what has come under the observation of this consulate, was passive until the 13th of the present month. The official newspaper of this day's date contains an important and significant communication from the minister of internal affairs, addressed to the governor of this district, and is as follows:

AGAINST EMIGRATION.

The I. R. governor's office has directed to all the subordinate authorities the following circular:

The I. R. office of the minister of the interior has communicated by dispatch, dated October 13, as follows:

The result of the consular reports relating to immigration from Austria-Hungary for the year 1886 in several States of the North American Union show a sensible increase as compared with the year 1885.

From the report of I. R. consulate at Baltimore it is to be seen that in the year 1886 the number of Austro-Hungarian immigrants landed in that port was 3,009, against 620 in the preceding year. And the I. R. consulate at Chicago shows that emigration from the states of the monarchy towards those of the Union has remarkably augmented in the year 1886 in comparison to 1885, and precisely of 9,082 persons. According to these figures no less than 19,994 landed in New York during the year 1886, coming from Cisleithania, which for the greater part seek industrial employment for subsistence. The consular offices state that the lack of workmen in the principal cities of North America does not now exist as a few years since; that the supply of workmen in all trades is represented to be now more than ever in excess of the demand, and that foreign workmen find it very difficult to obtain employment, also because they find a declared opposition and difficulties of all sorts on the part of labor associations which exist there.

The immigrant who, as it has been stated, searches for the greater part for subsistence in industrial employment, which is now more than sufficiently provided with workmen, contributes to increase the difficulty which exists also in America relative to the labor question; for which reason the Americans consider immigration a danger to the country, and it is probable that within a short time the limitation of immigration will be publicly considered.

In general the consular reports show the urgent necessity of dissuading the needy, in their own interest, from emigrating to North America. The above is being communicated to the authorities with reference also to instructions previously imparted, charging them to combat with all possible and legal means the tide of the emigration, and especially to oppose with all rigor the enrollment of emigrants on the part of the agents.

At the same time the co-operation of all the bishops is besought by the means of their subordinate clergy.

During the past few weeks groups of intending emigrants have called at this consulate for information concerning the United States, and the consul can but relate to them the phenomenal prosperity of the Union. The only reliable statistics of emigration obtainable for this district are those kept in this consulate, and are taken from the passenger lists of all steamers clearing from this port directly for the United States, the number of which, from February 19, 1887, to date has been 130.

HENRY W. GILBERT,
Consul.

UNITED STATES CONSULATE,
Trieste, October 29, 1887.

EXOTIC FLAX.

REPORT OF CONSUL WILLIAMS.

Mr. Jean De Turck, of Lille, France, who is a skillful manager of spinning-mills, has brought to light a textile plant of Chinese origin, which has some analogy with ramie. He claims to have discovered a process for degumming this textile, which comes already decorticated, and to produce from it threads of great strength and beauty. He has termed this textile "*Lin Exotique*," in English "exotic flax."

He claims for this material that in its native country its cost is 30 to 35 centimes (6 to 7 cents) per kilogram (2.2 pounds), and 40 to 50 centimes laid down at Marseilles, whereas flax costs, according to quality, from 1 to 2.5 francs (19.3 to 47 cents) per kilogram.

The exotic flax, without assorting, is fit for the coarsest fabrics or the finest, the latter only requiring the usual more careful and complicated preparation.

The finest lace and the strongest cord can be made from it, as well as an infinite variety of intermediate fabrics, such as table-cloths, napkins, carpets, plush, wearing-apparel, etc.

He spins without combing, and thereby saves 40 per cent. of waste incident to flax combing. The material can be worked with the ordinary flax machinery. The whole secret lies in the preparation of the exotic flax.

The textile can be mixed with flax, silk, wool, and cotton. Its strength is wonderful, and a sewing thread can be spun which requires no twisting. The refuse is utilized, and can be worked in the same manner as cotton, which it closely resembles. If desired, the long fibers can be broken up by an ordinary crusher and reduced to the usual length of cotton fiber.

It could be cultivated in the United States, Algeria, and other countries of similar climate.

I inclose a few specimens which I have been able to procure, but with the greatest trouble and difficulty.

These, however, seem to corroborate many of the above assertions. I am well assured that the various fabrics made from this plant, which can be seen at Lille, appear to indicate beauty, strength, and general utility.

LIST OF SAMPLES.

A. Crude exotic flax, decorticated, first and second quality.
A'. (1) Crude exotic flax, decorticated; (2) crude exotic flax, decorticated (new process).

B. Crude exotic flax, combed to different degrees of fineness for spinning different numbers of thread.

C. Belgian flax, at 2 francs per kilogram, spun in No. 80 in the raw state, containing all of its natural gum.

D. Exotic flax, at 50 centimes the kilogram, spun in No. 80, with gum and all other impurities extracted, bleached and colored without loss.

E. Bleached upon the grass without lime or caustic.

F. Exotic flax, No. 70 to 80, for lace manufacture, sewing-thread, etc.

G. Exotic flax, woven into plush, a coarse specimen, but susceptible of additional fineness.

H. Cotton made from exotic flax, coarse made, without machinery.

K. Threads of exotic flax, indicating its strength.

I believe that the material and process of Mr. De Turck are worthy of the serious attention of our spinners.

The following correspondence, with which I have been recently favored, throws additional light upon the discovery by Mr. J. De Turck:

[Letter of Mr. Romanch Du Caillond, flax-spinner, corresponding member of the committee appointed to examine into the resources of Tonkin.]

Mr. PRESIDENT: Mr. J. De Turck, a manufacturer of Lille, France, writes to me for information concerning the dolichos of Tonkin (dolichos-cat-yang of Cochin-China).

This plant is noted in the list of vegetable-bearing plants by the Nos. 366, 367, and 368 in the Annuary of French Cochin-China for the year 1878. By a process of his own invention, Mr. De Turck has been able to utilize the stalks of the dolichos as a textile. He claims that he has obtained many results which, on account of the low price of the raw material, make this discovery very valuable.

Mr. De Turck would therefore like to be informed—

(1) Whether the three varieties of dolichos-cat-yang (dâu-bac, dâu-deâ, dau-den) are found in large quantities in Tonkin?

(2) Whether he could be placed in communication with some house of Tonkin which would undertake to furnish him bales of the plant?

(3) Whether he could obtain an unlimited quantity of the stalks of this plant?

A reply to these inquiries by the secretary of the committee, or some resident French merchant who would enter into an agreement for a supply of this article, would be highly esteemed.

P. S.—I inclose in my letter a sample of dolichos-cat-yang.

[Reply to the letter of Mr. Romanch Du. Caillond by Mr. Voignier, chief veterinary surgeon and Secretary.]

HANOI, *July* 15, 1887.

SIR: I have been instructed by Colonel Heintz, the president of the committee of examination of the resources of Tonkin, to give you all possible information, and will follow the order indicated by your inquiries. I shall enter into some details regarding its cultivation, for the subject is most important.

In reply to the first question, I have consulted Mr. R. P. Bon, a missionary at He-So, who is a high authority in botany, and says that the dolichos-cat-yang to which you refer in your letter (inclosing a specimen) is simply the dolichos cultivated everywhere throughout Tonkin. Here it bears the name of dâu. The plant produces the dolique, or Tonkin bean, and, next to rice, is the most important crop of the country. This plant is cultivated on thousands of acres of land bordering on the sea, by the side of the rice-swamps of Hung-hoa, and the banks of all the rivers. The seed is sown in February and March in the north and a little later in the south.

When inundations are feared, the dolique is planted alone or with other seeds to form clusters; in the latter case Indian corn or castor-beans are planted, as, in addition to the shade which they afford, they produce a valuable crop.

This crop is suitable to lands which are too elevated or too porous for rice. It is also cultivated as an alternate crop with rice, to prevent the exhaustion produced by two successive rice-crops on the same land.

It is cultivated also to rid the land of weeds. Its greatest value is as a substitute for rice, when the floods or drought have interfered with sowing or have destroyed the crop. This was the case this year in both north and south; the rice planting

of the month of May was, in a great measure, prevented by the exceptional dryness of the previous winter, and in the south by the annoyances from the river pirates. The Tonkin farmers fell back upon the dolique.

I have seen in the month of February, in the provinces of Nam-Dink and of Nink-Cink, and in May, in Day at the Black River and around Hung-hoa, the fields covered with dolique of fine appearance and vigorous growth, in contrast with meager and puny rice-fields. Thanks to the abundance of dolique produced in the north, a famine has this year been avoided.

It usually ripens about the first of May, or a month earlier than the rice crop. This fact is very important and greatly adds to its value, as the granaries are then empty or nearly so, and this timely supply is oftentimes a great relief. When the country is deprived of this resource it often becomes necessary to cut the rice in an unripe state for immediate use, which invariably produces great mortality among the people. At the time of harvesting the dolique the country is all astir. Women and children overrun the fields, gathering the ripe pods in small baskets. The men in long files are seen wending their way to their villages, with long bamboo sticks upon their shoulders, on the ends of which the well-filled baskets are balanced. As there is no rest for the land in this country, the stalks are buried with the plow. Occasionally a few are saved for fuel, bedding for the buffaloes, or compost heaps in the open field; but the quantity thus used is small. The rice harvest also is upon them and calls for the labor of all hands. It is thus seen at a glance that the dolique is an important crop for Tonkin, and can relieve a deficiency of rice, than which it is acknowledged to be more nourishing.

In the fine collection of seeds sent by Mgr. Puginier to the exposition at Hanoi I discovered 26 varieties of dolique, differing from one another in size and color, and there are probably as many more attainable.

According to the opinion of R. P. Bon all of these varieties can be classified under the three following heads:

(1) The white—dâu-tseng—which is identical with that called dâu-bac in Cochin-China.

(2) The red, corresponding with the dâu-deâ, mentioned in your letter.

(3) The black, or dâu-den.

The great number of sub-varieties to which these give rise are dwarfs or trained on poles, the latter being generally found in the inclosures of villages.

In general the dolique is smaller than even the smallest French bean. In the open fields the small varieties are cultivated; they are hardy, resist storms, and yield abundantly.

The pods are from 8 to 20 centimeters (0.3937 of an inch) in length, flat, with a protuberance like a spindle where each seed is formed, and they stand on end like long thorns, and the field appears bristling with them. They are gathered as soon as they are ripe.

In reply to the second question: Nobody has, to my knowledge, undertaken to collect the stalks of the dolique.

To establish commercial relations with any one for that purpose, Mr. De Turck could apply to the bureau of instructions of the protectorship, to the chamber of commerce of Hanoi or Haiphong, and advertise in such a manner that French, Annamite, or Chinese merchants would engage in the trade.

In reply to the third question: As before said, there are so many thousand acres of land devoted to the cultivation of dolique, the stalks of which rot upon the ground, there could be no question about obtaining large quantities of the stalk.

The Tonkin husbandmen only avail themselves of a part of the advantages of their products. They give to the army service rice straw, turnip-tops, and hay, which latter they have only just now learned how to secure; but it would be necessary for some one to suggest to them the advantages to be derived from securing the stalks of dolique.

This plant would have the advantage over ramie of being cultivated for its stalk and seed. The initiatory step for M. De Turck, or some one acting for him, would be to secure a staff of Annamites or Chinese, and, at some central point near a stream, erect drying sheds or simply floors to assist open-air drying of the stalks. This step would be necessary, as the harvest often takes place in the midst of rain, and the stalks should be well dried and pressed to diminish bulk and save freight. The paraphernalia and outfit to secure a successful preparation of the stalk would cost but little, as hand labor is very cheap.

CHAS. P. WILLIAMS,
Consul.

UNITED STATES CONSULATE, ROUEN, FRANCE,
November 10, 1887.

FRENCH STEAMSHIP LINES TO BRAZIL.

REPORT OF CONSUL MASON.

There has been a recent addition of two regular steam-ship lines to the already extensive mercantile service between Marseilles and the South American ports, notably those of Brazil and the Argentine Republic. These additional lines have been established during the present month by old and well-known steam-ship companies belonging to the port of Marseilles, and the new service is announced to continue as follows:

(1) *Compagnie Fraixsinet.*—Steamer leaves Marseilles the 1st of each month for Genoa, St. Vincent, Montevideo, and Buenos Ayres.

(2) *Compagnie Nationale.*—Leaves Marseilles the 25th of each month for Genoa, Montevideo, and Buenos Ayres.

The steamers of these lines are of iron, and range from 2,000 to 2,800 tons register and from 1,800 to 2,500 horse-power. Their principal freight traffic will be from Marseilles, but their most valuable service will be the transportation of emigrants from Genoa to the new countries south of the equator, which have become in recent years more than ever an El Dorado for the redundant population of Italy.

In addition to the foregoing, the following long-established service will be continued as heretofore:

(3) *Compagnie Florio-Rubattino* (Italian).—Steamer every fortnight from Marseilles via Genoa for the Plate River, and one each month for Valparaiso and other Pacific ports.

(4) *Société Générale de Transports Maritimes.*—Steamer each ten days from Marseilles for Lakar, Santos, Rio Janeiro, Montevideo, and Buenos Ayres, touching at Barcelona and Gibraltar.

(5) *Compagnie Cyprien-Fabre.*—Steamer each month from Marseilles for Montevideo, Buenos Ayres, and Rosario.

There is thus established what is equivalent to considerably more than a weekly steam-ship service between Marseilles and the principal Atlantic ports of South America, and nothing could illustrate more forcibly than this the steadily growing commerce between Mediterranean countries and the rapidly developing territory of Brazil, Uruguay, and the Argentine Republic, where many thousands of Italians and other emigrants go annually to find new and permanent homes.

FRANK H. MASON,
Consul.

UNITED STATES CONSULATE,
Marseilles, October 18, 1887.

FEMALE LABOR IN THE MANUFACTURE OF READY-MADE CLOTHING IN GERMANY.

REPORT OF CONSUL MILLAR.

The Imperial Government of Germany has just issued an elaborate report containing the results of investigations into this question, which has attracted considerable attention in Germany.

The report may conveniently be dealt with under four heads: The classes of females employed, the wages they earn, their mode of living, and their general character.

CLASSES OF WORKERS.

As regards the first point, the workers in this branch of employment may be divided into two classes, professional workers, whose labor is their only means of subsistence, and amateurs, for whom it is only the occupation of their leisure hours. The professional workers are drawn chiefly from the families of the working classes and from country girls who come to town to enter domestic service, and then take to sewing as a more congenial, if less profitable, employment. The amateurs, or "lady workers," as they are sometimes called, are chiefly found in the families of minor officials in public and private services. Their chief object is to gain additional pocket money for dress and amusements, and, as they do not feel the pressure of actual want, they have no interest in keeping up the market price of work. Consequently they take work at relatively low rates for the sake of a small actual gain in money, and their competition has thus a very bad effect on the market, as it tends to reduce prices continuously, while making work more difficult to get. Each of these classes, again, is subdivided into workers in ready-made dresses and workers in underwear. The conditions vary considerably in these two branches, especially in the matter of wages, which forms the second head of this report.

The workers in the ready-made clothing branch are the worse off, because the work is not only worse paid, but lasts only during the season, while their colleagues in the other branch are sure of continuous employment. In Berlin, the chief seat of these industries, cloak makers earn from 8 to 9 marks a week, beginners and the less skillful hands from 4 to 5 marks. The season lasts only four or five months, and the rest of the year the workers have to find other employment. The makers of underclothing earn from 5 to 15 marks weekly. The average is difficult to fix, because the work is so varied, and is frequently done by piece-work. Perhaps it may be said that a skillful seamstress will earn from 12 to 15 marks weekly. As a specimen of the prices paid for piece-work the following are given:

1 dozen collars	50 to 85 pfennigs.
1 dozen cuffs	60 to 110 pfennigs.
1 dozen shirts, the fronts, collars, and cuffs being supplied ready sewn	2.50 to 6.50 marks.
1 dozen button-holes (hand-work)	10 pfennigs.
1 gross button-holes (machine-work)	90 pfennigs.

A deduction of about one mark weekly has to be made for thread and sundries which the seamstresses have to supply themselves; and where the work is done at home the cost of fuel, light, and maintenance of the machine also comes into consideration.

WAGES.

In Posen the daily wages in the factories vary from 50 to 60 pfennigs for ten or eleven hours' work. Piece-work done at home is paid for as follows: Overshirts, 4 marks; night-shirts, 2 marks, and various articles of ladies' wear from 1 to 2 marks per dozen. As a day's work varies from three-fourths dozen of the dearer to 2 dozen of the cheaper articles, the average weekly earning of a worker may be put at 12 to 15 marks, as in Berlin. In the ready-made dress branch the average does not exceed 1.50 marks.

In Breslau wages are somewhat lower, and range from 90 pfennigs to 2 marks. Young women who act as superintendents, or who do work in private families, earn more.

In Erfurt wages are very low among quilters. They seem to average about 7 marks a week for good workers; but six weeks in the year they are unemployed. Hand-sewers are worse paid; all the year round they do not earn more than 4½ to 5 marks a week.

In Dusseldorf, Reuss, Barmen, and Elberfeld trade is much depressed by Berlin competition. It is said that good seamstresses can earn from 2.50 to 3 marks daily, and good embroiderers from 2 to 2.50; but the average appears not to exceed 1.50 marks.

In Saxony these branches occur chiefly in the districts of Plauen and Chemnitz. The average wages are reported to be now from 5 to 10 marks weekly. In Leipsic, where, however, the trade is not carried on to any great extent, the workers are chiefly paid by time, fair workers earning on the average 8 to 10 marks, good workers 11 to 12 marks. Piece-workers can earn from 16 to 18 marks a week by working twelve hours a day, but a sixth has to be deducted for thread, oil, and sundries.

In Bavaria the manufacture of these articles is also not carried on to any very large extent. The supply does not do more than meet the demand in Bavaria itself. The average wages are stated to be about 9 marks.

In the smaller German states the condition of the workers does not differ materially from that in the larger kingdoms.

MODE OF LIVING.

Passing to the third head, the mode of living of the workers, it will at once be evident that workers on the minimum wages are entirely precluded from any attempt at independent existence apart from the aid of their families. But as many of those who earn from 10 to 15 marks do manage to exist apart from their friends, it may be of interest to see how it is done. The answer is a painful picture of the straits to which the pressure of competition has reduced a whole class of useful members of society.

In Berlin the daily expenses of the seamstresses have been calculated to be as follows:

	Pfennigs.
Sleeping accommodation and coffee (breakfast)	20
Bread and butter for lunch	15
Dinner, generally eaten in a restaurant or "people's kitchen"	30
Bread and butter in the afternoon	15
Supper	20
Two bottles of beer	20
	1.20

Or 8.40 per week.

Persons with practical acquaintance with economical living in Germany assure me that for the above sums it is possible in the cheaper quarters of the towns to obtain measurable quantities of eatable food; but there is also no doubt that the above figures represent the minimum of actual expenditure. Considering, further, that no provision is made for washing, repairs, or replacement of clothes, it is evident that the barest economy will scarcely be able to make the wages meet the demands. And if we add the outlay for that weekly amusement which the German nature imperatively demands,

it seems almost inevitable not to curtail even the above meager outlay.

In point of fact, this is what happens. From Posen it is curtly reported that potatoes form the principal food of the workers. In Breslau a large number eat no dinner, but have some warm food with their supper; in the summer they live during the week on bread and herrings or sausages, and only eat a decent meal on Sundays. A still more striking case reported from the Dusseldorf-Elberfeld district is that of a married woman with two children who, in sixteen months, earned 419 marks. Materials and repairs to her machine cost in the same period 27 marks, leaving a net income of 392 marks. Rent of her two rooms for the same period came to 292 marks. The reporter very truly remarks that without the assistance of well-to-do relatives the woman could not have existed.

CHARACTER OF THE WORKERS.

On the last head, that of the general character of the workers, I can only touch lightly. The replies to the questions asked on this subject were, indeed, rather ambiguous, being generally to the effect that the character of the workers in the clothing branch was not perceptibly different from that of other classes in the same rank of society. So far as this means an absence of actual vice, it is satisfactory, and the German police have undoubtedly been successful in keeping social corruption within very narrow limits. On the other hand, it is not satisfactory in that it ignores the fact that among young people of the lower, middle, and working classes the relations of the sexes are very lax, and that this laxity has received a kind of tacit sanction which makes it dangerously easy to transgress the line dividing right from wrong, and it is certain that insufficient wages are often the determining factor in taking a false step. From this point of view, the results of this inquiry in Germany are a warning, and one which all who are interested in the welfare of society should take to heart.

SAMUEL ROLFE MILLAR,
Consul.

UNITED STATES CONSULATE,
Leipsic, September 26, 1887.

GERMAN EAU DE COLOGNE.

REPORT OF CONSUL WAMER.

Since the new and increased taxation in Germany on home produced brandy and spirits went into operation on the 1st of October this year, the manufacturers of eau de Cologne in this city have been somewhat stirred up to know whether it will not likewise have the effect of increasing the price of their Cologne water, and, as I hear, steps have already been taken by the leading manufacturers to induce the German Government to make some such alteration in the present tariff as to be more favorable to their purpose.

By this new law the import duty on foreign spirits has also been raised on arrack, cognac, and rum in barrels from 80 marks per

100 kilos to 125 marks per 100 kilos; and on all other brandy and spirits to 180 marks per 100 kilos.

I am informed that some of the leading Cologne water makers of this city use chiefly spirits of wine (Weinsprit) imported from France in the preparation of their eau de Cologne, and in consequence of this increased duty in Germany, one of the largest and most important firms here has already announced that after the 1st of October this year they will be obliged to raise the price of their manufacture.

[Notice.]

In consequence of the German law of the 24th of June, 1887, in respect to taxation of brandy (Imperial Law Journal No. 21), the duty on French spirit of wine (paragraph 44) has become so considerably increased since the 26th of June this year that I am placed under the necessity of raising the price of my Cologne water (eau de Cologne), which I herewith, in the interest and in accordance with the wish of my customers, make known.

Cologne, September, 1887.

Since the new duty has come into operation, the wholesale price for the ordinary sized bottles per six dozen has been raised, as I am informed, from 12.50 marks per dozen to 13.50 marks per dozen, with the usual discount of 5 per cent.

In this connection it may be interesting to give the declared value of the export of eau de Cologne from Cologne to the United States during a series of back years, which are as follows:

Year.	Amount.	Year.	Amount.
1876	$21,225	1882	$15,858
1877	15,424	1883	54,131
1878	12,253	1884	23,134
1879	10,732	1885	13,209
1880	19,892	1886	14,500
1881	16,076		

The above amounts can hardly be taken as a fair representation of the actual value and the quantity of eau de Cologne consumed by the American people, since nearly every traveling American visiting Cologne seldom leaves the place without purchasing a bottle or more of its sweet-smelling water.

Since writing the above I have read a semi-official statement from Berlin, in the Cologne Gazette, that the carrying out of the spirits taxation law is attended with so many difficulties that the reserved revision of the administrative regulations will have to be shortly undertaken. Many of the existing regulations need to be entirely changed, and it will be necessary also to observe very closely the large number of proposals sent to the Government in various forms by interested parties. Work has already been commenced for some time on the material relating to the revision.

WILLIAM D. WAMER,
Consul.

UNITED STATES CONSULATE,
Cologne, October 13, 1887.

CULTIVATION OF COTTON IN ASIATIC RUSSIA.

REPORT OF CONSUL-GENERAL WAY.

In this, as in all other economic undertakings, the policy of the Russian Government is unmistakable. It is clearly and distinctly defined in all its acts and declarations. It is the dream of their statesmen to make the Empire self-sustaining, and they ardently hope and believe that the day is not far distant when they can confidently assert that every thing natural and artificial necessary to the sustenance and comfort of the people is produced within the bounds of this vast Empire

AREA UNDER CULTIVATION.

It is asserted by patriotic Russians that the cotton products of Asia will in a few years supersede all foreign varieties and render the home spinner independent of America, and the Government is fostering this idea by strenuous efforts to increase the area devoted to the planting of cotton. At present, owing to a lack of water, this area is limited, but distinguished engineers are now engaged in determining the question whether a large plateau of land favorable to the production of this staple is or is not capable of successful irrigation. Should this report show its feasibility, an impetus will be given to the industry. A tradition exists in the "Khanate of Bokhara" that this plateau was the original cradle of cotton, and that the first planting of it known to mankind was initiated by its former inhabitants.

STATE AID.

The successful reclamation under its present water-privileges is problematical; still, there are large districts in other provinces which by state aid can be devoted to its culture. There will be no lack of land if the Imperial Government determine to promote the enterprise, of which there seems to be no doubt at present. The question to be dealt with is this: Granted that the all-powerful aid of the state is enlisted in its behalf, how will it affect the remaining cotton-producing countries?

At present the annual import of cotton into Russia amounts to about $38,000,000 in value, which is quite a disturbing factor in her commercial balance. If this sum can be kept at home it will prove vastly to her interest to promote and foster this enterprise in every legitimate manner.

LOCATION OF COTTON FIELDS.

The cotton of Bokhara (which country is at present the principal field of operations) is grown in the lowlands of the Sir-Darja and Amu-Darja (Oxus), in the Bokhara, Kohand, and Tashkent districts. The industry of Khiva and of the province of Erivain is much smaller, but the quality of the product in these last two districts is superior to any grown in Russia, the seed being annually imported from America.

It seems impossible to arrive at any correct estimate of the most essential points, viz, the quantity of land planted, the amount capable of reclamation, the yield per acre, or the total annual yield. I doubt if any tabulated statistics have as yet been prepared by the Government. None have, at least, been published. One source of information places the land in cultivation at 180,000 acres, with the possibility of 35,000 acres being added to it, and puts the total yield at 125,000 bales (of 250 pounds each). Another authority puts the total yield at 800,000 bales (of 250 pounds each) and a much larger acreage. These estimates are for Bokhara alone. These discrepancies arise probably from the first being an estimate of what finds its way to Moscow, the spinning center, while the other takes the whole yield, including the entire Asiatic consumption. The smaller figures are probably nearer the truth. The seed used is principally of native growth, and produces a cotton in character about equal in staple to the East Indian variety known as "Oomrawuttee," but very inferior to that product in cleanliness.

IRRIGATION.

The great difficulty is water. Instead of abundant and seasonable rains, the growth is dependent upon irrigation, and as this is an enterprise beyond the reach of private capital it is thought that the Imperial Government will apply the $2,000,000 annual increased duty on foreign cotton to the construction of the necessary works and permit the land-owners to reimburse the state by annual payment of water-taxes. To show how necessary irrigation is, it is reported that only one-eighth of a crop was made in Bokhara last year, owing to the water supply being cut off early in the season. An estimate has been forwarded to this consulate of a yield per acre of 180 pounds of clean lint, but with the statement accompanying it that 50 per cent. of it was seed remaining in the cotton after ginning it.

LABOR AND CULTIVATION

are of the most primitive character. The farming implements are rude, and the machinery employed totally unfitted for the uses intended. The labor is performed by women, who are paid at the rate of 7 to 12 cents per day. Both labor and cultivation are cheap, inefficient, and oriental in scope and energy.

PREPARATION.

Samples of Bokhara cotton sent forward for examination exhibit various lengths of staple, and are full of seed, motes, and trash. It is impossible to spin ordinary shirting yarn out of it unless it is mixed with American or East Indian cotton, and spinners report the waste as being three or four times as great as that found in the American imports. The ginning is done on a rude cleaning-machine moved or worked by hand. (The Central Asian Trading Association has in operation in Tashkent several saw-gins worked by steam, and has thus inaugurated a much-needed reform at that point.) The packages or bales contain every grade grown. I learn that there are in warehouse at Moscow about 15,000 bales altogether unsalable on account of the mixture of grades, seed, and trash contained in the bales. It will be necessary to open the packages and re-sort the contents before they will become merchantable. The prices paid for

cotton at Bokhara range from 4¾ to 7¾ cents per pound, while at Moscow the average price is 10 cents for properly prepared cotton that is, containing not more than 10 per cent. of seed.

TRANSPORTATION.

Transportation has been a serious impediment to its introduction into Russia. At present the bales are brought by horses (formerly camels were employed) from Bohkara to Tchard-Dshne; thence it is carried by railroad to Uzun-Aga (a station on the Caspian Sea). From Uzun-Aga it is brought by steamer to Samara, on the Volga River, and by the same kind of transport to Nijni-Novgorod fair, and ultimately goes to Moscow by rail, all at a freight cost of 2 cents per pound. Before the partial building of railroads the cost of transportation was much higher, being about 5 cents per pound, and the completion of the trans-Caspian line will inaugurate a still lower tariff of rates and solve one of the heretofore most formidable impediments.

Below you will find an article, translated from the St. Petersburg New Times, on this subject. Some of the grounds held by the writer are untenable, and contrary to generally received ideas.

[Extract from the St. Petersburg New Times.]

A correspondent from the fair at Nijni-Novgorod writes:

During the month of May of the present year a petition was presented to the minister of finance, in which it was shown that great benefits might be reaped from an increase of duty on all cotton imported from abroad, on condition that the produce of this increased duty be used for planting and cultivating cotton in Asia Minor, on Russian territory, which is composed of an *argile* (clayish) earth, suitable for cotton, and which produces a particularly superior quality from American and Egyptian seed, but with the absolute condition that it be irrigated. The construction of canals for irrigating this land costs, however, so much that only persons of large means could undertake this at their own expense.

The project of a supplementary duty on cotton, to be employed for this production, was very well viewed by the department, and the minister of finance whilst sojourning at the fair of Nijni-Novgorod announced to the merchants that he would not delay presenting their petition to the council of the Empire.

This project, before being presented to the minister, had been commented upon in Moscow by a special commission organized for this purpose during last spring, and was the cause of disagreement between manufacturers and merchants of different nationalities, on account of the enormous gain which most of these gentlemen have made from the cotton trade. Notwithstanding this, the unanimous opinion was that the cultivation of cotton in Asia could not be otherwise than profitable. This disagreement has had a tendency to lower the prices as much as possible on cotton coming from Asia, notwithstanding an advance in price of 18 per cent. asked for American cotton compared with that of last year. From the very beginning of the fair every depreciating thing that could be said was published against Asiatic cotton, whilst in reality that of Khiva is of a very superior quality. The Bokhara cotton is, as usual, mixed, because it contains parts which are well cleaned and others full of seed, for which reasons the price is generally lower. This cotton is cleansed by the natives in quite a primitive manner. The yellow cotton comes from Egyptian seed and its staple is very tender, but that can not be brought to bear against it, especially if it is used in the manufacture of colored stuff (prints). Concerning the cotton produced from American seed in Asia Minor, the jury of brokers of Liverpool, in the month of March, 1887, decided that in reference to its qualities it was equally as good as the real American cotton (imported from America). However, the pool organized against the Bokhara and Khiva cotton, with the intention of depreciating its value, has completely lost its aim.

On the 91th of August the first lot of this cotton was bought by Mr. I. K. Poliakoff, director of the new Nicholas mills, and the pool was dissolved at one blow.

The Khiva cotton has been sold at 9 rubles 40 copecks to 9 rubles 50 copecks and even 9 rubles 65 copecks per pood, and the cotton from American seed (spots) at 10 rubles 50 copecks, delivered in Nijni, and 10 rubles 50 copecks to 11 rubles, deliv-

ered in Moscow; the Bokhara cotton, at 8.50 rubles and 8.75 rubles the pood. The quantity of cotton coming from Asia Minor imported into Russia amounts to 150,000 poods; the quantity coming from American seed 40,000 poods, and half of this quantity is actually sold. A portion of it will certainly be stored in Moscow with a view of advancing the price.

The fair of Orenbourg and Asia has already supplied (in direct communication) 300,000 poods of cotton delivered to different manufactories in Russia.

According to a telegram dated Bokhara, 20th August, the total product of the cotton crop will not exceed this year 100,000 poods on account of the closing of the flood-gates (sluices) giving passage to the Russian waters.

Usually this crop amounts to 700,000 or 800,000 poods, and as the local consumption is 200,000 poods, the crop of 1887 will remain there altogether, and it is believed that the Nijni fair will not see any of it in 1888. The short crop has raised the price of Bokhara cotton on the spot to 7.50 rubles; add to this 2.15 rubles for transportation, and it costs in Nijni 9.65 rubles, which is too dear.

The sellers of Asiatic cotton have consequently received for their cotton the prices asked at the beginning of the fair, and these prices are quite in conformity with its value. If the Asiatic cotton had really been inferior, or the prices too high, the manufacturers would not have bought it, and the prices demanded by the sellers would have proved that they wanted to enrich themselves. Nothing of this exists, and the manufacturers in using this cotton at 8.50 rubles the pood, in preference to American imported cotton, really gain 50 copecks per pood.

GENERAL REMARKS.

It will be seen from what has been said above that the cultivation of this plant in Central Asia is in its infancy. It is in a chaotic state, and unless the Imperial Government summons to its help the most experienced executive aids, millions will be wasted before any tangible profitable results are attained. The growing of cotton in America by inexperienced persons has cost the amateur many dollars, and the result of English efforts in India during and subsequent to the civil war in America point a moral fraught with interest to the Imperial Government. But, after all has been said against its present unsatisfactory condition, there is much to be declared in favor of its future. Patriotism may save an empire, but it can not reverse the laws of nature.

The peculiar characteristics of all Asiatic cotton dissipates the idea that this will prove to be a rival to the long silky staple of the American product, and the planter of the Southern States, with the united advantages of a temperate climate, fertile soil, and generous rainfall (influenced by those contiguous seas, the Atlantic Ocean and the Gulf of Mexico) can bid defiance to any competing efforts, individual or municipal. His product stands without a rival; there is no substitute for it; it is necessary to every spinning community producing certain grades of goods; and the hot suns of Central Asia forbid the growth of any cotton its equal in body, staple, and "spinner-waare" qualities. He may rest securely in the knowledge that this truth is patent to every manufacturer, English or Continental.

It was the province of the writer to export large quantities of the fine varieties of sea-island cotton-seed to Egypt during the years 1856–'57 for the purpose of improving the staple and value of Egyptian cotton. For a year or two there was an improvement in the product from this experiment, but at the end of three or four years it became, or relapsed into, simply Egyptian cotton. The influences surrounding it in its habitat were missing and the plant and product assimilated itself to its existing environment.

So with the specimen exhibited to the Liverpool brokers in March, 1887. It must have exhibited the characteristics of American cotton, as it was probably the first year's product of American seed, but

what will be its character three years from this unless fresh importations of American seed are used? One sample of a similar growth was forwarded to this consulate. I found the evidence of American origin mixed with a short curly Asiatic staple, exhibiting every tendency to deterioration. One very remarkable proof of this was the quantity of immature seed, called by the trade "motes," which no process of ginning now practiced has ever been able to eradicate; showing plainly some adverse climatic influence preventing the development of what is to all intents an exotic plant, and presaging that, without annual renewals of imported seed, the cotton grown from the American grain must relapse into the congenital qualities of a short, coarse, curly fibered cotton, similar to that grown in China, India, and other oriental countries.

Instead of importing seed from abroad, it would prove more beneficial to the industry if seed were selected from the finest plants of native growth each year and used exclusively for propagation. The quality of the product would improve gradually, nature would lend its beneficent aid instead of combating the alien plant, and the Imperial Government would have the proud satisfaction of knowing that Russia had succeeded in producing the finest variety of Asiatic cotton known to the spinning world. This would be in accordance with the laws of nature, is easily accomplished, and is free from the attendant expense necessarily incurred in any other plan. I think it will be understood that there are certain "garden spots" in Asia which will produce a high grade of cotton, but such spots are merely accidental cases.

The growth of cotton in Asiatic Russia and its future development is an industry worthy of the best efforts of the Imperial Government. With a population of over 100,000,000 (a large portion of which must wear cotton goods) there will be a growing demand for Asiatic cotton, and if the product becomes too large for the increasing population Russia can then become an exporter of cotton, and while the American cotton will under all circumstances be necessary to her spinners, it will simply result in an exchange of similar products of differing values; the prices obtained from English and continental mills will go to the United States, and she will not be brought each year to see $40,000,000 expended for a foreign product without hope of reimbursement.

Immense works for irrigation, a proper system of water distribution, regular methods of cultivation, improved machinery for ginning and packing the product will all come in time, but Russia will still require and import her share of the American crop, though she may export to other countries twice as much Asiatic cotton. Great as are the resources of the Empire, varied as is her soil and climate, she can not controvert the laws of nature. She can not export figs from Archangel nor ice from Merv, and the elements of value which she holds in her vast territory will doubtless in the fullness of time yield her large crops of the product on which her thoughts are now intent, but she can never hope to be a rival to that land where all the elementary forces of nature combine to aid mankind in the perfect production of a perfected plant.

CHARLTON H. WAY,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
St. Petersburg, October 17, 1887.

[Taken from Consular Reports, No. 85, p. 74.]

Quantity and value of cotton imported into Russia.

Years.	Cotton, raw.		Cotton manufactures.	Cotton yarn.
	Quantity.	Value.		
	Pounds.	*Dollars.*	*Dollars.*	*Dollars.*
1873	122,171,520	28,965,528	5,051,482	10,528,308
1874	160,371,388	41,643,250	4,717,402	10,399,429
1875	170,304,732	38,536,468	4,539,056	11,227,264
1876	149,782,710	28,162,112	3,805,056	10,622,448
1877	132,251,976	25,980,752	1,531,858	4,394,458
1878	227,895,588	49,537,132	3,338,966	12,285,692
1879	205,954,398	44,881,013	4,473,040	22,758,744
1880	175,917,564	34,755,219	4,032,063	18,905,165
1881	297,983,088	55,600,342	3,098,496	9,393,408
1882	241,567,200	47,450,366	3,583,468	10,017,392
1883	291,240,000	61,011,600	2,528,500	6,817,200
1884	225,972,000	40,133,520	2,189,775	5,509,590
1885	229,608,000	41,955,012	1,893,372	4,944,900

ADVANTAGES PRESENTED TO AMERICAN MERCHANTS IN CONSEQUENCE OF ECONOMIC CHANGES IN RUSSIA.

REPORT OF CONSUL-GENERAL WAY.

After a long period of commercial depression Russia, in common with other countries, is witnessing what promises to prove a marked revival in trade, and merchants are looking forward to a period of activity and prosperity. This improvement manifests itself most prominently in the two largest industries of the Imperial Empire, viz, the manufacture of iron and steel and the production and sale of cotton goods.

It is almost impossible to obtain reliable statistics in any department of trade in this country, owing to the facts that they are carelessly verified, are published in a desultory manner, and are often grudgingly, sometimes unwillingly, bestowed upon the applicant for information. All information, however, points to a general revival of prosperity. Manufacturers of iron and steel products speak encouragingly of the future. They have large orders on their books, more contracts are offered than they can undertake at present, and they are working at a profit; something unknown to them for a series of years.

THE COTTON TRADE.

In the cotton manufacture, which is undoubtedly the largest industry dependent on importations, the improvement is still more marked. Goods which remained in warehouses last year and were unsalable, save at ruinous prices and on extremely long credits, have disappeared, and gone into the hands of jobbers and consumers. There has been, furthermore, an advance of 15 to 20 per cent. in the prices of cotton goods, and some mills are under contract for their entire output for the next twelve months. One important sign of prosperity in any branch of trade is the eagerness with which new capital enters it. This encouraging omen is not lacking here. It is expected that 153,000 spindles and 4,100 looms will be added to this industry during the ensuing year.

In view of this revival of trade it would be a wise step on the part of our merchants and manufacturers if they endeavored to find an outlet for some of their products in the markets of this country.

There are certain kinds and classes of goods peculiar to America which find ready purchasers in Russia. It is an indispensable condition, however, that they are of the highest grades and of superior workmanship. It is useless to attempt competition in the common and lower grades of manufactured articles. The German workshops and the "Kustar," or peasant artisan, a class peculiar to Russia, fill these markets with all such wares at prices which would astonish an American mechanic. A Russian peasant being debarred from outdoor agricultural work for six or seven months in the year is willing to devote himself to the manufacture of the commoner grades of goods during that time, content if he simply makes enough to supply a moiety of the food he consumes. He regards his time as valueless, and, no matter how slight his remuneration, it is a profit made in days which would otherwise be spent in idleness. Keeping this fact in view, a careful study of the Russian tariff will convince an American exporter that he can find a market in Russia only for special articles of the higher grades.

The following list comprises some of the most salable American products, but a close examination and correspondence with Russian merchants will lead to a marked increase in the catalogue:

(1) Agricultural machines.
(2) Agricultural implements.
(3) Cotton-gins for Asiatic Russia.
(4) Yarns of the finer counts.
(5) Machines for increasing the illuminating and heating powers of gas.
(6) Machines for increasing the illuminating properties of Russian petroleum, which has a specific gravity of .840, as compared with .800–.810 for the American product, and emits a dim, smoky light and a disagreeable odor.
(7) Improved kerosene lamps and stoves suited to the Russian product.
(8) Labor-saving machines of every description.
(9) Improvements in fire-arms.
(10) Improved machinery, all descriptions.
(11) Railroad supplies.
(12) Canned fruits and shell-fish. (Canned meats and vegetables are as cheap here as in America.)

Owing to the heavy duties on all iron and steel manufactures, it will be apparent to the exporter that strength combined with lightness is an important element in all machinery designed for this market. If the articles offered for sale be first class in their construction, there is no difficulty experienced in finding purchasers at remunerative prices. As I have remarked above, the Russian tariff will be a safe guide to the exporter who remembers that first-class workmanship is above all essential to success.

RAISING THE TARIFF.

Another fact which renders it necessary for the American merchant to act with promptness in his endeavor to obtain a foot-hold in these markets, is the certainty of a heavy increase in the Russian tariff early next year. It is well understood both here and abroad that it is the policy and intention of the Imperial Government to carry out the doctrine of protection to its final analysis. A large and influential body of Russian statesmen believe that everything necessary to the comfort and well-being of this people can be produced

within the borders of the Empire; that Russia is not dependent upon any foreign importations; that for the success of its manufactures it is only necessary to place a high import duty upon foreign articles, a duty high enough to amount to a bounty. They believe that this will stimulate Russian manufacturers to embark in their production, or at least induce foreign capitalists to move here and produce the same goods out of Russian material and with Russian labor. In either event it builds up Russian industry, and keeps Russian money at home. While this heavy increase in the tariff is directed principally against Germany, which floods every market within the Empire with common goods, still all exporting countries will find these markets virtually closed to most of their products. However, there are certain articles essential to her industries which must be imported, no matter how high the duty may be placed. In all such cases the tax falls upon the consumer. The most important of these products is American cotton, necessary to her mills, and which can not be supplanted by any Asiatic-grown substitute.

The imports of foreign cotton into Russia for the past three years have been as follows:

Year.	Bales of 450 kilograms.	Value.
	Number.	
1884	501,619	$38,317,778
1885	510,226	32,954,220
1886	579,812	35,804,564

These figures do not represent the total consumption, as cotton to the amount of 448,000 bales (according to some authorities) is now supplied by Khiva, Bokhara, and other parts of Asiatic Russia.

The present import duty on foreign cotton is equal to about 1 cent per pound. The Imperial Government contemplates—nay, is almost committed to the purpose—raising this duty to 2 cents per pound and 10 per cent. ad valorem, equal altogether to about 3 cents per pound. This tax must fall upon the consumer, and it is estimated that an increase of 1 kopeck (one-half cent) on the aarcheen (28 inches) of cloth will enable the manufacturer to pay this extra duty. Contracts for future delivery of goods are based upon the present duty, with the stipulation that in the event of the duty being raised the purchaser is to pay a further price equal to such amount of duty.

INTRODUCTION OF FOREIGN CAPITAL.

I have spoken above of the hope on the part of Russian statesmen that these high import duties would at least tempt foreign capitalists to enter Russia and aid in her development, always using Russian material and Russian labor. For this reason the duties on some manufactured products is almost prohibitory. In the course of time they will be certainly made so. A Chinese wall is being erected around every industry practicable in the Empire. Protective duties in every way equivalent to bounties will be placed on every manufactured article, and a splendid field opened up to American enterprise. No country offers such opportunities to the manufacturer coming here with capital and industry, for while the Imperial Government views askance every manufactured article of foreign importation, it welcomes the manufacturer who enters Russia with capital and with the view of making the same article. They will grant every

facility, and if the enterprise be a worthy one and likely to benefit the country, subventions and state aid are not impossible. The opportunities are sufficiently tempting to any enterprising American who is willing to devote some years of his life to accumulating a fortune in a foreign land. Russia teems with undeveloped resources awaiting either the increase of her own means or the introduction of foreign capital to utilize them.

CAPITAL INDISPENSABLE.

The query is often propounded to consuls in Russia: "Can I come to Russia without means and obtain a livelihood?" For all such correspondents there is but one reply. A man without means has no opportunity here, and had much better remain at home. Labor is abundant and cheap, and all occupations and professions are overcrowded.

Another inquiry frequently addressed to the same officials is this: "To whom can I ship such goods as I wish to introduce into the Russian markets?" There are several respectable firms engaged in introducing American products, but the trouble is that nearly every American merchant wishes to reimburse himself at once by drafts against his shipments. As many of these articles are experiments, and nearly all of them require time for their successful disposal, the Russian merchant naturally objects to these advances. He prefers to receive sufficient and proper samples and to transmit orders based upon such samples for execution. Once introduced the demand springs up, and if the article has merit a large trade follows. It is perhaps needless to convey the caution that all patented articles should be patented in Russia before any samples are shipped here.

CHARLTON H. WAY,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
St. Petersburg, October 9—21, 1887.

STATE OF TRADE IN RUSSIA.

REPORT OF ACTING CONSUL HORNSTEDT.

For the last four years trade in Russia has been so bad and discouraging to all, that the sudden and unexpected revival in it during this year's fair at Nijni is well worthy of notice.

The steady increase of duties imposed upon importations of every description of goods has benefited but a few.

It has no doubt been the cause of developing manufacture in Russian Poland, where the iron trade, cotton industry, and woolen manufacture have assumed largely increased proportions, but this has only brought on a depression upon the same industries in other parts of Russia, followed by the results of serious competition and overproduction.

The great annual fair held at Nijni has for several consecutive years been growing worse and worse. The Russian manufacturer, in order to get rid of his largely increasing stocks, had to give long credits as an inducement to buy. Last year some of the large cotton weavers sold their goods at three years' credit. This year matters were quite different; cotton goods advanced in price 15 to 20 per cent., all the stocks were cleared, the demand being somewhat in excess of the supply.

THE COTTON INDUSTRY.

The cotton industry, being without exception the most important trade in this country (the extent of it will be seen from the annexed synoptical table), its condition may therefore be accepted as a standard measure of trade in general.

Yarns have advanced at an equal rate with cotton goods, and all the spinners have secured orders to keep them fully employed until September next. At present no further orders could be placed. The supply of yarn not being equal to the requirements of the weavers, it is fully expected that, should the exchange improve but slightly, considerable quantities of yarn would again be imported.

It is however quite certain that at least 4,000 looms and 120,000 to 150,000 spindles will be erected in the course of this year, which means an increase in importation, but it may be safely assumed that about one-half of the quantity of looms to be erected will be of Russian manufacture.

Moscow merchants dealing in machinery, tools, and every description of so-called auxiliaries for mills, are now well employed and take a very hopeful aspect of affairs, at all events for the next twelve months to come. Cotton from Asia has proved an utter failure this year; though offered at 10 cents per pound, duty paid, there were no buyers, the quality being so bad. I have seen samples of it and found the cotton mixed to such an extent that to ascertain its average quality it would be necessary to sample every bale in several places. This mixing of bad and unclean cotton with good quality has of course been purposely done with dishonest intention; there are now about 15,000 bales of such cotton stored up in Moscow for want of buyers, and would require re-sorting before it could be sold at all.

A synoptical table showing the number of cotton spinning and weaving mills existing in the Empire of Russia, together with a comparative table showing the development of the cotton industry from 1877 *to* 1887.

Name of the government or province.	Number of mills.				Number of spindles.							Number of power-looms.	
	1877.		1887.		1877.			1887.					
	Spinning mills.	Weaving mills.	Spinning mills.	Weaving mills.	Mule spindles.	Throstle spindles.	Total.	Mule spindles.	Throstle spindles. Flyer.	Throstle spindles. Ring.	Total.	1877.	1887.
Petersburg	13	10	12	11	691,604	58,516	750,120	666,392	28,482	97,104	791,978	6,606	8,554
Moscow	18	35	24	34	615,382	25,044	640,426	811,608	2,624	146,474	960,706	16,288	24,205
Vladimir	10	29	11	36	353,984	48,764	402,698	424,558	20,420	92,616	537,594	13,421	90,967
Tver	4	5	5	6	182,560	28,096	210,656	182,628	18,984	33,572	235,184	5,053	6,139
Jaroslav	1	1	2	1	99,462	4,088	103,550	177,920	....	11,824	189,744	944	1,002
Riasan	1	3	1	4	66,769	26,420	95,189	118,000	3,400	19,400	140,800	349	1,693
Smolensk	1	1	1	1	26,676	.....	26,676	36,734	.....	29,568	66,292	500	780
Kostroma	....	9	1	15	.....	.....	.....	25,704	.....	4,488	30,192	3,675	6,716
Tiflis	.....	.....	1	1	.....	.....	.....	5,600	.....	5,200	10,800	.....	284
Kazan	1	1	....	....	5,564	.....	5,564	.....	.....	.....	.....	35	.....
Kalouga	1	....	....	....	4,200	.....	4,200	.....	.....	.....	.....	.....	.....
Kherson	.....	.....	1	1	.....	.....	.....	2,400	7,788	480	10,668	.....	122
Poland	9	6	13	8	173,480	43,160	216,640	379,248	26,856	99,518	505,622	4,417	10,572
Perm	1	1	....	....	2,100	400	2,500	.....	.....	.....	.....	75	.....
Baltic provinces	4	3	4	3	173,896	107,592	281,488	229,986	108,472	9,904	348,362	2,016	2,237
Finland	3	2	3	2	16,500	40,076	56,576	30,884	45,120	8,860	84,864	1,122	1,225
Total	67	106	79	123	2,414,127	382,156	2,796,283	3,091,652	262,146	559,008	3,912,806	54,566	84,516

TEA.

Kiachta tea, of which there were large supplies, was freely bought at the fair.

In spite of the great cost of carriage overland, the difference in the duty and the low rate of exchange made it possible for the overland tea to shut out the so-called London teas, for the time being, entirely from the market, a most unusual occurrence.

MARKET FOR AMERICAN WARES.

The present moment appears to me to offer more than ordinary inducements for American manufacturers who are desirous to gain a footing in the Russian markets to make an effort. Makers of machinery and tools will do well to study the Russian customs tariff, and those who can best adapt themselves to its requirements will carry the day. To practically illustrate my meaning I will repeat a statement made to me the other day by a large importer of machinery here. He told me that among some tenders he had for the supply of steam-engines there was one for $3,600 and another for $4,800, both of which suited his purpose equally well. He was, however, compelled to give preference to the latter, although it cost so many dollars more, because the cheaper engine, being so much heavier, would, with the duty added to it, have been the more expensive engine of the two. It should therefore be the great aim of all manufacturers to produce, by using the best material, as light an article as due regard to strength will allow of, more especially as there is every reason to believe that the rates of duty will again be increased from the 1st of January next. Duty on cotton, now 1 cent per pound, is expected to be increased to 2 cents and 10 per cent.

N. W. HORNSTEDT,
Acting Consul.

UNITED STATES CONSULATE,
Moscow, October 11, 1887.

RUSSIAN CUSTOMS DUTIES.

REPORT OF CONSUL-GENERAL WAY.

The announcement that Germany intends to increase very largely her duties on corn and cereals of all kinds, to prevent Russia from pouring her harvests (which have been unusually great in her western provinces) into that country, have led to counter action on the part of this Government, and it is reported that the minister of finance has proposed to the imperial council of Russia the following additions to the present import duties. As it affects one very important American product (and is what I anticipated in my report on state of trade in Russia), I deem it proper to send the information to the Department.

The following are the principal changes proposed:

Raw cotton, to 1 ruble per pood (36 lbs. 10 oz.).

Precious stones, pearls, garnets, corals (both genuine and imitated), from 2 rubles and 40 kopecks to 24 rubles per pood.

Coffee, to 3¼ rubles per pood.

Oranges and lemons: 20 kopecks (a kopeck is about ½ cent American currency) per pood.

Tea, 2½ rubles per pood.

Cotton web (except sewing and knitting yarn), to 7 rubles per pood gross.

Lace (hand-made) and silk (machine-made) lace, to 7 rubles per pood.

Lace (all other machine-made), to 3 rubles per pood.

Watchmakers' tools and goods to pay an exceptionally high duty.

Other changes will undoubtedly be proposed.

CHARLTON H. WAY,
Consul-General.

CONSULATE-GENERAL OF THE UNITED STATES,
St. Petersburg, October 12–24, 1887.

TRADE OF LEEDS.

REPORT OF CONSUL WIGFALL.

A tabulated statement of the declared exports to the United States from this consular district for the year ending September 30, 1887, is forwarded herewith. As will be seen from the quarterly totals the volume of that trade is well sustained; an increase for the year as compared with the preceding one being shown to the extent of $674,842.32. The comparative increase is limited to the first three quarters; the fourth, or September term, showing a small falling off as against the corresponding quarter of 1886. This may be more than fully accounted for, however, by the exceptional export during August and September, 1886, of machinery and material consequent upon the closing here of an important undertaking, accompanied by a transfer of interest to the United States. The decrease alluded to moreover was comparative only; in actual amount the September quarter this year—as was also the case last year—having been the largest of the series.

The revival of trade referred to in previous reports has continued to gain strength, and is becoming generally recognized as a reality. Much remains to be added before anything like extreme buoyancy, or indeed universal activity, can be looked for; but trade as a rule is sound, and extensive changes of condition, when such shall come about, may reasonably be expected to occur in the direction of improvement.

I summarize the last published monthly report of the Leeds chamber of commerce (published October 6, 1887):

Woolens.—Improved demand for winter goods in the home trade; spring orders not quite equal to last year. Shipping trade fairly active.

Wholesale clothing.—Compares favorably with previous years.

Hats and caps.—Home trade fairly good; employers kept fully at work. An improvement in shipping department.

Felts.—A good demand.

Wool.—In London partially lower, but better tone latterly. Previous sales rates fully maintained for sound merino and the better classes of cross-bred.

Leather.—Rather fallen off during the month, and hand-to-mouth trade at prices in some instances favoring buyers. Tanning materials have fluctuated. Gambier a shade dearer. Light and fancy leather, as well as glue, without quotable alteration.

Wholesale boots and shoes.—A little improvement.

Flax.—Prices about last month's; if anything slightly favor buyers. Hemp: Italian, rather lower; Russian, a shade firmer. Yarns and twines: sales about as in July and August. Machinery standing or running short time.

Iron.—No improvement in finished iron. Orders hand-to-mouth and prices still most unremunerative. Tone of makers generally by no means encouraging. Few locomotive shops fully employed. Agricultural machinery without improvement. No renewal of activity in machine-tool trade. Slight falling off in cut-nail trade and short time; prices keep low.

Oil.—Olive, firm at Naples, but without transactions; Levant and Islands, slightly easier; rape, higher; cod, more demand. Linseed cakes, dull.

Paper.—Fair business done; prices low.

Tobacco.—A little improvement.

Fire-bricks.—Rather more inquiry. Little more doing generally. No abatement in demand for red bricks.

Cattle.—About average number brought to market.

Cereals.—Wheat: slight recovery, soon lost; currency again excessively low, and buyers showing marked caution. Barley: free sale for finer qualities. Beans and maize advanced, and oats without further decline. Demand for flour good at current low prices; advancing tendency.

Brushes.—Quiet; bristles, about stationery; bass, advanced.

Coal.—House, improving and prices firmer; gas, greater demand; steam and shipping, fairly active; engine, fair request. Pits making four to five days weekly.

Stone.—Good trade; orders plentiful; all quarries well employed.

F. H. WIGFALL,
Consul.

UNITED STATES CONSULATE,
Leeds, October 27, 1887.

Exports from the consular district of Leeds to the United States, during the four quarters of the year ending September 30, 1887.

Articles.	Quarter ending—				Total for the year.
	December 31, 1886.	March 31, 1887.	June 30, 1887.	September 30, 1887.	
Chemicals and dye-stuffs	$39,253.03	$39,906.04	$28,881.28	$33,858.69	$141,848.99
Chinese goods	.....	.....	1,050.26	.....	1,050.26
Confectionery, etc	6,077.33	3,207.86	4,634.67	1,830.41	15,750.27
Cottons	6,058.22	12,346.14	8,690.16	8,265.18	35,359.70
Cottons and mohair	39,077.87	10,001.93	14,495.18	14,645.10	78,220.08
Cottons, sewing	14,339.25	13,445.43	18,126.50	22,945.24	68,755.42
Cotton velvets	3,434.06	3,893.25	.....	2,850.25	10,177.56
Down quilts, etc	.....	.....	.....	1,698.41	1,698.41
Earthenware, bricks, etc	24,961.35	16,046.89	14,661.26	19,910.52	75,580.02
Fustians	12,043.08	11,712.62	20,655.31	8,070.16	52,481.17
Glass	.....	3,075.22	5,645.98	3,708.44	12,429.64
Grease, etc	746.93	1,139.17	.....	1,354.07	3,240.17
Hair, wool, etc	68,114.68	42,702.43	94,789.91	62,331.35	267,938.37

Exports from the consular districts of Leeds to the United States, etc.—Continued.

Articles.	Quarter ending—				Total for the year.
	December 31, 1886.	March 31, 1887.	June 30, 1887.	September 30, 1887.	
Leather, etc	$8,073.69	$1,652.22	$7,285.20	$6,545.49	$23,556.60
Linens, twines, etc	81,956.45	13,511.57	16,821.99	12,735.51	125,025.52
Metals, machinery, etc	77,694.00	86,717.61	56,776.66	44,738.86	265,926.63
Miscellaneous	4,471.30	1,892.47	2,332.83	2,939 78	11,636.38
Paper hangings	.....	7,199.52	.....	.....	7,199.52
Plushes	.....	4,202.77	.....	.....	4,202.77
Shawls	5,044.31	5,463.62	161.60	15,760.50	26,430.03
Silk and cotton	195,028.08	145,508.90	260,080.12	316,915.95	917,528.05
Silk, cotton, and mohair	28,511.29	8,284.54	11,600.40	7,347.18	55,743.41
Silk and worsted	.....	3,245.45	410.30	1,115.20	4,770.95
Skins, furs, etc	16,445.00	33,743.64	46,725.58	7,276.33	104,190.55
Stationery	6,699.21	231.04	.....	95.36	7,015.61
Unions	17,192.79	12,911.45	11,282.90	16,090.39	57,477.53
Woolens, etc	276,350.51	452,963.14	373,129.69	418,760.22	1,521,203.56
Woolens, worsteds, cottons, etc	21,556.80	38,218.28	32,694.94	64,670.54	157,135.56
Worsteds	427,138.88	552,960.97	335,140.73	472,341.18	1,787,581.76
Yarns, mohair, worsted, and silk	3,027.21	4,975.02	3,009.89	6,582.06	18,204.18
Total in United States gold	1,383,185.32	1,531,149.19	1,364,682.29	1,575,331.87	5,854,348.67
Total for preceding year	1,079,963.84	1,263,727.22	1,218,782.08	1,617,033.21	5,179,506.35
Increase	303,221.48	267,421.97	145,900.21	.....	674,842.32
Decrease	.....	.....	.....	41,701.34	.....
Percentage of increase	28	21¼	12	.....	13
Percentage of decrease	.....	.....	.....	2¼	.....

SUGAR INDUSTRY OF THE ARGENTINE REPUBLIC.

REPORT OF CONSUL BAKER.

The sugar industry of this country is yet in only a partially developed state. It has not yet assumed such proportions that its product enters into the world's commerce. There are no exports of sugar from the Argentine Republic. Indeed, what is produced is not yet sufficient to meet the home demand, and a large proportion of the sugar consumed in the country is still imported from abroad. The Government, however, appreciating the favorable conditions of the upper interior provinces for the growth of the cane, has within the last few years been legislating for the express purpose of fostering and protecting the industry. Under these stimulating influences the production of sugar is beginning to assume the position of one of the permanent and growing industries of the country, and the amount of Argentine sugar put upon the market is year by year showing a very large increase. With the protection which it is thus receiving from the Government, it is quite impossible to keep track of the new plantations which are being started in the upper interior provinces.

HISTORY OF THE INDUSTRY.

And yet the production of sugar can not be considered as a new industry in this part of South America. Its history dates back since the beginning of the seventeenth century, when the Jesuits began their remarkable missionary labors in Paraguay and Mission. In both of those provinces they introduced the cane from Brazil, and cultivated it to supply the limited amounts of sugar needed by their different establishments. Of course, at that epoch, the fabrication was conducted in a very primitive manner, the cultivation of the

cane being confined to a few acres, each family using what it needed for its own consumption, either in a dry state, or as a sirup or as distilled spirits.

I find no record of when sugar-planting was first introduced in the upper interior provinces of the Republic, but it must also have been by the Jesuits at an early day, since the inventory, made by them on their expulsion from the country in 1767, mentions among their effects "a sugar-field at Zules, Tucuman, and a mill for grinding the cane." After their expulsion, however, the industry was not only neglected but almost forgotten until 1821, when Dr. Colombres, a Catholic priest, brought some of the seed from Peru to Tucuman, and thus revived the industry in that province. About the same time the cane was also introduced into the provinces of Jujuy, Salta, Catamarca, and Santiago from Peru. It was brought to the province of Corrientes from Paraguay, from plants originally introduced from Brazil.

PROGRESS IN LATE YEARS.

Thus at the period when the Argentine provinces, having finally thrown off the Spanish yoke, were establishing themselves as an independent confederation (1825), the cultivation of the sugar-cane was a well-understood industry in all the upper interior provinces, the tests which had been made proving that the cane could be grown profitably from the twenty-ninth degree of south latitude to the northern extremities of the country. It is only, however, within the last thirty years that the production of sugar in the Argentine Republic began to attract public attention. Since then the movement has been rapidly extending, and the breadth of land planted in cane has so increased within the last few years that in the provinces of Tucuman, Santiago, Salta, and Jujuy the production of sugar has become one of the principal industries.

IN THE PROVINCE OF TUCUMAN.

At the present time the province of Tucuman is the most important seat of the sugar-plantations, the genial climate rendering it suitable for the growing of the cane. Indeed, by reason of the fertility of the soil, the variety of its agricultural products, the subtropical temperature which seldom if ever reaches the freezing point, and the delightful scenery which is everywhere spread out before you, the province has been called "The Garden of South America." Certainly I have visited no more interesting portion of the country, and it may well be regarded as one of its most favored spots. It is admirably wooded and watered, the lofty peaks of the Sierra Aconquija imparting an aspect of grandeur to the scenery, while the wide extended fields of grain, sugar-cane, rice, and tobacco bear witness to the industry which characterizes the people. The construction of the Great Northern Railway, which almost bisects the province from south to north, has given an immense impulse to the sugar production by furnishing it a rapid and convenient outlet to the markets of the southern provinces. The area under cultivation in 1874 was 5,000 acres, in 1884 it was 25,000 acres, and now it is estimated to be about 30,000 acres. The number of sugar farms in 1874 was 233, in 1884 it was 612, and it is now estimated to be 800. The greater portion of the sugar establishments are now supplied with the best milling machinery that France and Germany manufacture, and represents a

capital of seven or eight millions of dollars. In 1885 the mills employed 87 steam and 20 hydraulic motors, representing a total of 1,450 horse-power. Since then large additions have been made to the capacity of the mills for crushing the cane.

DEPARTMENT OF TUCUMAN.

In the vicinity of Tucuman there are at least two hundred and seventy sugar plantations and upwards of thirty large sugar factories. Of the most remarkable of the latter it may not be uninteresting to give the following particulars:*

Esperanza, the property of Wencelas Posse & Son, 8 miles east of the city of Cruz Alta, founded in 1845. The estate consists of 1,920 acres, of which 840 are under sugar, watered by two canals. The factory, which covers 24 acres, has 11 engines of 160 horse-power in the aggregate. It employs 27 mechanics and 600 laborers, and can turn out 6,000 tons of sugar per annum. Its present production is 2,000 tons of sugar and 3,500 barrels of rum. It uses the electric light.

Concepcion, the property of Juan C. Mendez, founded in 1840, is 2 miles from the city. The estate consists of 2,400 acres, of which 440 acres are under sugar-cane. Factory, furnished with approved machinery, covers an acre; 8 engines, with 140 horse-power; employs 420 hands, and is able to turn out 3,000 tons of sugar per annum. Its present production is 1,500 tons of sugar and 2,600 barrels of rum.

Lastinia, property of Max Etchecopar is 10 miles from the city, on the banks of the river Sali. It includes about 2,000 acres, and has French machinery. The plantation under sugar is 500 acres. It produces 1,200 tons of sugar and 2,000 barrels rum. The mills are run by 8 engines, with 120 horse-power.

San Juan, the property of Paz & Porse, is 2 miles from the town. It was founded in 1870, and is now furnished with the best French machinery. It has 200 acres in sugar cane. It employs 180 men and turns out 400 tons of sugar and 700 barrels of rum.

Amalia, founded in 1879 by E. Molina, is 2 miles south of the town. The estate contains 840 acres, of which 330 are in sugar-cane. The factory covers 5 acres and is furnished with the most approved French machinery; runs 4 engines aggregating 55 horse-power, and employs 350 men. It produces annually 700 tons of sugar and 1,200 barrels of rum.

San Miguel, at Ranchillos, is the property of Belaustequi & Co. The estate consists of 1,100 acres, of which 450 are under sugar. It has French machinery and employs 20 mechanics and 300 laborers. It produces 700 tons sugar and 2,000 barrels rum.

Luxan, near Cruz Alta, is the property of Gallo Brothers. It was founded in 1874. The estate consists of 2,200 acres, of which 450 are in sugar. It has the latest machinery, employs 250 men, and can turn out 3,000 tons of sugar per annum, It has 4 engines of 50 horse-power. Its present production is 600 tons of sugar and 1,000 barrels of rum. It has the electric light.

Paraiso, at Cruz Alta, founded in 1838, belongs to Garcia Brothers; has 620 acres under sugar. It has new French machinery, run by

* NOTE.—For these details I am indebted in great part to a pamphlet called "La descripcion geografica y estadistica de la provincia de Tucuman" and to Mulhall's "Handbook of the River Plate."

5 engines aggregating 50 horse-power. It produces 1,000 tons of sugar and 1,700 barrels rum yearly, employing in the business 13 mechanics and 300 laborers. It uses the electric light.

San Felipe, 3 miles from town, is the property of the Porse Brothers. It was founded in 1870. The estate consists of 3,400 acres, of which 850 are under sugar. It employs 5 mechanics and 420 laborers; has fine French machinery, with 7 engines aggregating 85 horse-power. It produces annually 1,200 tons of sugar and 2,000 barrels of rum.

Ralos, founded in 1879, 15 miles from town, is the property of Avellaneda & Teran. The estate consists of 7,400 acres, of which 420 are under sugar. It has French machinery, with 5 engines, 70-horse power, and employs 200 men. It produces 600 tons of sugar and 1,000 barrels of rum.

San José, property of J. Frias, is 3 miles from town. The estate consists of 5,000 acres, of which 400 are under sugar. It has the most approved machinery, employs 200 men, and produces 400 tons of sugar and 700 barrels of rum.

Manantial, 3 miles from town, belongs to Videla & Garnaud. The estate consists of 440 acres in sugar. It has French machinery, employs 150 men, and produces annually 400 tons of sugar and 700 barrels of rum.

Colmenar, 2 miles from town, was founded in 1884 by Mata & Astoul. The estate consists of 880 acres in sugar. It employs 250 men, the factory covering 2 acres, with the latest French machinery. It produces annually 1,000 tons of sugar and 1,800 barrels of rum.

Buenos Airs, 20 miles east of the town, is the property of Castellanos & Casaliers. The estate consists of 26,000 acres, though only 200 are under sugar. It employs 80 hands.

San Andrès, 4 miles from town, is the property of Domingo Garcia; 400 acres in sugar, has French machinery run by 3 engines aggregating 45-horse power. It produces 500 tons of sugar and 800 barrels of rum.

Union, 2 miles from town, is the property of Toboada & Dode. It has 200 acres in sugar-cane. It has French machinery and produces 200 tons of sugar and 800 barrels of rum.

There are a number of other small establishments in the department, which have an aggregate of 470 horse-power, and produce 6,100 tons of sugar and 11,000 barrels of rum.

The factories in the department of Tucuman have altogether a total of 1,450 horse-power, have 15,000 acres under cane, employ 6,700 men, and produce 18,000 tons of sugar and 33,000 barrels of rum.

DEPARTMENT OF FAMAYLLA.

The department of Famaylla, south of Tucuman, which is well watered by streams from the Sierra Aconquija, is likewise a very important sugar-producing district. It contains 60 sugar establishments, of which 8 are on a large scale, with factories attached, as follows:

Lules, the property of C. Hilaret, was established in 1879 on an old Jesuit plantation; estate 450 acres, of which 150 are under sugar. The factory is supplied with French machinery, 200 horse-power, and employs 400 laborers. A great portion of the cane is purchased from neighboring plantations. It produces 1,200 tons of sugar and 2,000 barrels of rum yearly. It employs the electric light.

San Pablo, the property of the Nongues Brothers was founded in 1855, and has since been supplied with the best French machinery; estate 24,400 acres of wood and arable land, of which 550 acres are in sugar. It employs 300 persons and produces 1,000 tons of sugar and 1,800 barrels of rum.

Mercedes, the property of the Padilla Brothers, was founded in 1876; estate 1,300 acres, of which 400 is under sugar. It has approved machinery, 100 horse-power, employs 220 men, and produces 1,000 tons of sugar and 1,800 barrels of rum yearly. It has a capacity for four times this amount.

Bella Vista, the property of Fernandez Brothers, was founded in 1882; estate 230 acres, all under sugar, employing 80 men. It has French machinery, and it produces 200 tons of sugar and 300 barrels of rum yearly, though it has a capacity for ten times as much.

Nueva Baviera, the property of Deporté & Co., was founded in 1881. The estate consists of 200 acres, all under sugar. The machinery is from Germany, employs 150 men, and produces 400 tons sugar and 700 barrels rum.

Reduccion, the property of V. Porse, was founded in 1852, and refitted with French machinery in 1883. The estate covers 22,000 acres, of which 600 are under sugar. It employs 160 men and produces 600 tons sugar and 1,000 barrels rum.

Carpinchauga, the property of Jean Ricalt, was founded in 1884; has French machinery. The estate consists of 720 acres, all under sugar, and employs 150 men. It produces 600 tons sugar and 1,000 barrels rum.

Hide Park, the property of Quinteros & Porse, was founded in 1884; has 120 acres under sugar, and employs 40 men. It produces 100 tons sugar and 200 barrels rum.

These 8 establishments have 2,800 acres planted in sugar-cane, employ 1,500 men, have 1,200 horse-power, and produce 5,100 tons of sugar and 8,800 barrels of rum annually. Much of the cane used in these mills, of course, is grown on small farms, the owners of which sell to the factories.

DEPARTMENT OF MONTEROS.

The Department of Monteros, lying along the river Aranilla, has also upward of 20 sugar plantations. The following are the principal ones:

Providencia, owned by a company, of which J. Claria is the manager, was founded in 1884. The estate consists of 25,000 acres, of which 320 are in sugar. The French machinery in use is capable of producing 6,000 tons of sugar and 10,000 barrels of rum; but as yet the production does not exceed 500 tons sugar and 800 barrels rum. It employs 360 men and uses the electric light.

Los Ingleses, the property of Robert Methven & Co., was founded in 1882. The estate consists of 210 acres in sugar-cane, employs 200 men. The factory uses Preston & Faucett's machinery, and produces 700 tons of sugar and 1,000 barrels of rum.

Santa Lucia, the property of Costanti & Co., was founded in 1884. The estate consists of 8,000 acres, of which 200 acres are in sugar. The factory has French machinery.

There are several other sugar establishments in this department, but I have no particulars in regard to their capacity or product.

DEPARTMENT OF CHICLIGASTA, ETC.

The department of Chicligasta is likewise quite noted for its sugar plantations, of which it possesses 45, many of them being very large, and growing a cane which is said to be the best in the province. It has, however, only 2 factories of any importance, as follows:

Trinidad, the property of Mendez & Heller, was founded in 1872; the estate contains 2,200 acres, of which 820 acres are in sugar-cane. The factory covers two acres; has the most approved machinery, 8 steam-engines of 120 horse-power in the aggregate, and employs 400 men. It produces 2,000 tons of sugar and 3,500 barrels of rum.

San Felipe, the property of Felipe Bernan, has approved French machinery. The estate contains 300 acres, of which 200 are in sugar.

In the other departments of the province there are a number of small establishments for the production of sugar, but they are hardly deserving of mention.

IN THE PROVINCE OF SANTIAGO.

The sugar industry is of such recent date in the province of Santiago del Estero that the product as yet is of small proportions. During the last five years quite a number of plantations of the sugar-cane have been made in the vicinity of the city of Santiago, and the reports in regard to their progress are favorable, especially of those along the Rio Dulce; but in other parts the tendency of the country to droughts, in the absence of proper irrigation, sometimes very seriously affects the cane. I am not able to give the names of the different sugar establishments, but it is stated that they have a total capacity to crush 70 tons of cane per day. The principal one of these sugar factories is that of Señor Contreros, which is capable of producing 1,500 tons of sugar and 8,000 barrels of rum per annum.

IN THE PROVINCE OF SALTA.

The province of Salta is also beginning to cultivate the sugar-cane in considerable quantities, its almost tropical climate being well adapted for the purpose. In the department of Campo Santo are several extensive plantations, the principal one being that of Señor Conejos, capable of turning out 300 tons per annum. In the department of Cerrillos, and especially in the beautiful valley of the Lerna, the inhabitants are likewise engaging in the industry, though occasionally the plants are nipped by the frost. The department of Candalaria has several plantations and small mills; and in Oran, which lies on both banks of the Bermijo River, there are quite a number of fine sugar establishments. Every year an increased breadth of land is being planted in cane.

JUJUY AND RIO NEGRO.

In the province of Jujuy, the most northern limits of the Argentine Republic, there are a number of sugar establishments. The most important of these are in the department of Perico, whose valley is watered by the Rio Grande. Adjoining its chief town, Carmen, there are a number of sugar mills, but mostly worked on primitive principles, without modern machinery. The greatest sugar-

growing department, however, is that of the Rio Negro, which lies between Salta, Oran, and the Gran Chaco, most of the work being done by the Mataco Indians, who are generally industrious and quite handy in the business. The number of plantations has greatly increased within the last few years. The climate is tropical, with heavy rains in summer, and dry winters, frosts being almost unknown. The principal sugar establishments are as follows:

Ovejero, the property of Messrs. Ovejero, with 650 acres in cane, gives employment to 600 hands and produces 340 tons of sugar and 1,000 barrels of caña or rum annually.

San Pedro, the property of Señor Araoz, with 400 acres in sugar-cane, gives employment to 360 Indians and produces 180 tons of sugar and 800 barrels of caña.

San Lorenzo, the property of Señor Villars, has 200 acres in cane and employs 300 Indians. It produces 120 tons of sugar and 500 barrels of rum.

Palos Blancos, the property of Señor Azota, is a new establishment. It has 240 acres in cane and employs 260 men. It produces 120 tons of sugar and 400 barrels of rum.

Piedras, the property of a company in Salta, was founded in 1857 and has 320 acres in cane. It employs about 300 Indians and produces 160 tons of sugar and 500 barrels of rum.

Reduccion, an old Jesuit plantation, has 200 acres in cane and produces 100 tons of sugar and 400 barrels of caña.

Soria, the property of a gentleman of that name, was founded in 1862. It has 200 acres in cane, employs 250 men, and produces 100 tons of sugar and 400 barrels of caña.

There are other sugar establishments, though they are, as yet, of no great importance, and new ones are being established every year.

IN THE PROVINCE OF CATAMARCA.

In the province of Catamarca, although there are sugar plantations in different parts of the country, the industry can hardly yet be said to have a permanent foot-hold. Thirteen miles north of the city of Catamarca, in the department of Piedra Blanca and near the little town of San José, there is a sugar mill which produces sufficient for the local demand; also in the department of Alto there are a number of small sugar plantations, but there is as yet but little development, owing to the want of the proper machinery for extracting the juice from the cane.

IN THE PROVINCE OF CORRIENTES.

The same may be said of the province of Corrientes. In the department of Lomas, along the banks of the Upper Paraná River, a number of Paraguayans are engaged in the cultivation of the cane, but only on a small scale. Likewise in the department of Itati, San Luis, Caacati, Mercedes, and La Cruz, respectively, there are sugar plantations, mostly in the hands of the aborigines, and by very imperfect methods they manage to make some sugar and rum, but it scarcely supplies the local demand.

IN THE GRAN CHACO.

In the Argentine Chaco, along the banks of the Paraná and Paraguay rivers, especially within the last few years, a number of quite

extensive sugar establishments have been erected; and it is said that both climate and soil are so admirably adapted to the industry that it must have a great development in that region, the facility for shipping it down the river at cheap rates being a great argument in favor of the locality. In the interior, at the points where the Jesuits in the eighteenth century had their missions, are still to be seen the remains of the sugar establishments which they erected and which were worked by the Indians, but very little sugar is now made at any of these places.

TOTAL AREA OF SUGAR PLANTATIONS.

There are no official data on the subject, but it is estimated that the total amount of land in sugar plantations is now about as follows:

	Acres.
Province of Tucuman	25,000
Province of Santiago del Estero	9,000
Province of Corrientes	1,300
Province of Jujuy	4,000
Province of Catamarca	800
Province of Salta	4,300
Territory of the Chaco	600
Total	45,000

There may be a few sugar establishments in some of the other upper provinces, but they are not of sufficient importance to materially change these figures.

THE SUGAR PRODUCT OF THE COUNTRY.

In regard to the product I have not been able to obtain any complete returns later than 1885. I give them below:

Province.	Tons of sugar.	Estimated value of crop.
Tucuman	26 000	$5,900,000
Santiago	9,000	2,200,000
Corrientes	1,300	300,000
Jujuy	4,500	960,000
Salta	4,500	920,000
Catamarca	1,000	250,000
Chaco	700	150,000
Total	47,000	10,680,000

M. De Moussy, in his work on the Argentine Republic, states that the total product of the sugar crop in 1857 was 800 tons for the entire Republic. So that the progress which the industry has made in the last twenty-five years can not fail to attract attention.

SUGAR IMPORTS FOR THE LAST TEN YEARS.

In spite of the increased production, however, there does not appear to be any very great reduction in the aggregate amount of the sugar imported into the country. It is true the returns show an almost total suppression of the imported white and brown sugars, but they likewise show an increase in the amount of refined sugars.

This will be seen from the following table, which I have compiled from official sources:

Year.	White sugar.	Refined sugar.	Brown sugar.	Total.
1877.....kilograms..	9,779,566	11,413,227	2,078,465	23,271,258
1878.....do....	7,598,050	13,019,409	1,578,433	22,195,892
1879.....do....	6,408,841	14,698,591	1,621,065	22,928,497
1880.....do....	7,439,307	11,547,818	1,641,022	20,628,147
1881.....do....	6,805,756	17,568,704	1,921,004	27,295,467
1882.....do....	5,733,004	14,745,172	1,929,770	22,407,946
1883.....do....	3,066,310	20,068,524	883,996	24,018,830
1884.....do....	4,347,900	28,595,445	1,966,772	34,910,117
1885.....do....	936,983	17,983,161	117,401	19,037,548
1886.....do....	2,189	18,242,831	10,161	18,255,181

It appears from this table that, while the imports of white and crude sugars have become almost *nil*, those of refined sugar show an increase, since 1877, of 6,839 tons. The reduction, however, in the total imports of sugar since 1877 are 5,016 tons, which, at the custom-house or official valuation of 20 cents per kilogram, would amount to about $1,000,000.

It must be stated, however, that there are yet no sugar refineries in the country, and for this reason the refined imported sugars have no competition from the native production, and the increase is perhaps no greater than can be accounted for from the increase of population using that class of sugar.

PRESENT TRADE IN REFINED SUGARS.

Brazil has in the past furnished nearly all the white and brown sugars which have been imported into the Argentine Republic. Thus in 1884, the last year that the imports of these classes of sugar were of any importance, about 4,000 tons out of the 4,347 tons of white and about 1,900 tons out of the 1,966 tons of brown sugar imported, were brought from Rio Janeiro. Since then the imports of these sugars have quite disappeared from the custom-house returns. The following table gives the imports of refined sugars for the year 1886 from each country:

Country.	Amount.	Value.
Germany.....kilograms..	1,077,047	$204,637
Belgium.....do....	3,195,105	607,070
United States.....do....	149,542	28,413
France.....do....	7,199,326	1,367,872
Holland.....do....	3,175,332	603,314
Great Britain.....do....	424,310	80,619
Uruguay.....do....	2,424,521	460,659
Other countries.....do....	597,648	113,552
Total.....	18,242,831	3,466,136

What is credited above to Uruguay does not really belong to that country, the cargoes having merely touched there for "orders" or for transshipment. The greater portion was probably of French manufacture, and the rest was doubtless from Belgium and Holland.

In former years there was a greater trade in refined sugars with the United States than there is now. It is not possible, however, under the present conditions of the sugar industry in the United States, for us to compete with Europe in that class of exports, and

now our imports of refined sugars into the Argentine Republic are quite insignificant, while the imports from France are every year increasing.

IMPORT DUTIES ON SUGARS.

The Argentine tariff is not a continuing law, but each year a new enactment is made by the National Congress, which fixes the duty on all imported articles, while the tariff of official valuation for custom-house purposes is, by the terms of the law, annually fixed by the executive department. Sugar is one of the articles which of late years has been the subject of frequent legislation. For many years the duty remained at 25 per cent. on the valuation.

In 1863 the appraised value of sugar was, for refined 21.6 cents, for white 21.6 cents, and for brown 14 cents per kilogram, and the custom-house duty was 22½ per cent.

In 1883 the appraised value of sugar was, for refined 19 cents, for white 14 cents, and for brown, 11.5 cents per kilogram, and the duty on refined was 27.3 per cent., on white 36.7 per cent., and on brown 44.5 per cent.

In 1884 the duty was fixed at 5 cents per kilogram on all sugars, which represented a charge of 26 per cent. on refined, 36 per cent. on white, and 43 per cent. on brown sugar.

In 1885 the duty was raised to 7 cents per kilogram on all sugars, which represented a charge of 37 per cent. on refined and of 54 per cent. on brown sugar. To this rate, by special law, an additional duty of 1 per cent. was added, thus making the impost over $70 per ton.

In 1886 there was no change in rates.

TAXES AND EXPORT DUTIES.

There are no special taxes on the sugar industry in the Argentine Republic. That on the land itself is the only tax it pays, and on a very low assessment.

On agricultural products there are no export duties.

FREE ENTRY OF SUGAR MACHINERY.

The sugar industry is further sought to be fostered by the removal of all duties on all foreign articles that necessarily enter into the manufacture. Thus at the present time all foreign-made machinery, casks, shooks, etc., intended to be used in the erection of mills or in the preparation of the article for market are now admitted free of impost.

THE COMPETITION WITH FOREIGN SUGARS.

Mr. Latzina, who is in charge of the national statistical office, in his report for the year 1885 makes these remarks on the subject:

When to the tariff duties we add the charges and expenses which are assessed against foreign sugar until it passes out of the custom-house, it appears that the sugar of the country has in its favor an advantage of fully 50 per cent., which goes to increase the price of the refined imported article, while the price of unrefined sugar, which otherwise would be imported, is advanced to such a figure that the present duty of 7 cents per kilogram may be considered as prohibitive. But, in spite of the charges which it has to suffer, foreign refined sugar is still able to compete in the markets of the country with what is produced by ourselves. From this we are able to judge how much we yet have to do before we place our sugar industry upon the same footing as that of Europe, which does not use the sugar-cane but beet-root, and yet fabricates an article of infinitely better quality and at much cheaper prices than we can do.

EXPENSE OF PLANTING AND COST OF PRODUCTION.

In regard to the cost of production in the Argentine Republic, a good deal depends on the locality. Along the shores of the Paraná and Paraguay Rivers, which are in direct communication by both steamers and sailing vessels with the Atlantic Ocean, thus reducing the rates of transportation for machinery and at the same time giving an outlet to market for the product, there must be a considerable saving in the first outlay as well as in current expenses. The only estimates, however, which I have before me are for milling establishments in the upper interior provinces. There the price of land is comparatively low, but the expense of clearing it, of inclosing it with hedges and ditches, and of making the irrigating canals, is to be taken into the account. Then the erection of the necessary buildings for the plant, which in some cases is very extensive, and the purchase and transportation of the requisite machinery, engines, boilers, furnaces, caldrons, evaporators, fermenting tubs, etc., all of which must be transported overland upwards of a thousand miles into the heart of the continent, require a large outlay and the investment of considerable capital, the amount depending upon the size of the plant and the quality of the milling apparatus.

As to the plantations, it is estimated that the first cost of putting down the cane is $160 per 40 acres, and that of cultivating and getting it to the mill is $50 per acre. The cane of the Argentine Republic, however, is different from that of the United States in this respect, that it yields the year around. Besides this, it does not have to be replanted. It is perennial. Only in Egypt, I believe, is the same thing known. In the United States it is planted every two years. With one planting a cane-field in Tucuman will give crops for twenty years, though after ten years of constant cutting it begins to show signs of deterioration in not producing such luxuriant stalks. The usual planting time is from the middle of May to the end of September, the distance between the rows being about 8 feet. The general harvest is from the middle of June to the middle of September. The cutting is done with ordinary hatchets, just below the surface. The peeling is done with the usual "camp" knives or facons. The transportation of the cane to the mills is with mule or bullock carts. The ordinary yield of the cane is 25 tons to the acre. The average yield of saccharine matter is 15 to 16 per cent. Under the old processes, however, only about 40 per cent. of the juice is extracted, and in its turn the juice is badly evaporated, only yielding 3 to 4 per cent. in sugar and rum on the weight of the cane crushed. With approved machinery the average yield of sugar is computed to be 6 tons to 100 tons of cane.

AMOUNT OF NATIVE AND FOREIGN SUGARS CONSUMED.

It has already been observed that the total sugar product of the country is nearly 50,000 tons of brown sugar per annum, and the average annual import of refined sugar amounts to 20,000 tons; so that the total annual consumption of sugar in the Argentine Republic must be about 70,000 tons, which is upwards of 50 pounds to each inhabitant. While the country now produces about two-thirds of the quantity consumed, it is a singular fact that there has been but little difference in the amount imported during the last twenty years. The imports were 18,200 tons in 1871, and they were 18,255 in 1886.

A GUARANTIED SUGAR REFINERY.

For the purpose of placing the sugar industry upon a better basis, and to save the necessity which now exists of purchasing refined sugars out of the country, the National Congress has just granted a concession or charter to a company to establish a sugar refinery at Rosario; and it guaranties a profit of 7 per cent. on a capital of $800,000 employed in this new industry. In other words, if the profits of the company do not amount to 7 per cent. the Government contracts to make up the difference. The establishment, on these terms, is to commence at once.

THE POLICY OF THE GOVERNMENT WITH REFERENCE TO THE INDUSTRY.

The policy of the Government with reference to the sugar industry of the country has been, since 1878, to lend its assistance towards its development. In that year Dr. Plaza, former minister of finance, made the statement that "the Argentine Government is basing its legislation on the proposition that, with proper encouragement and protection, the country will eventually be able to supply itself with wine, sugar, coffee," etc. It was with this object in view that the duties on foreign sugars have been gradually increased, until they now reach to 7 cents per kilogram and 1 per cent. additional. Dr. Pecheco, the present minister of finance, however, in his late report, makes this statement:

> We do not consider the sugar growers of the country to be entitled to any further protection than they now enjoy, since the only obstacle in the way of this branch of industry is the imperfect system of working it, which will be removed when the refinery, which has been guarantied by the Government, begins to work. Meanwhile sugar planting continues to progress, although many people prefer to use foreign sugar at a higher price on account of its superior quality. Still, the future of this important industry is most encouraging.

There is no doubt that the prospects of this industry in the Argentine Republic are encouraging; encouraging in this, that under the fostering care of the Government the production of sugar has developed into one of the chief occupations of the people of the interior provinces. A large capital is now invested in it, which is annually increasing; and, aside from the immediate owners of plantations and milling establishments, the industry provides a livelihood for the families of a very large number of mechanics and laborers. The industry has thus far been made not merely possible, but profitable, by the legislation of the country. It is, however, true that the native sugar is able to compete with the foreign article only by reason of the tariff which protects it. Without such assistance it is not yet in a condition to stand alone.

E. L. BAKER,
Consul.

UNITED STATES CONSULATE,
Buenos Ayres, October 25, 1887.

RAILWAY SYSTEM OF CENTRAL AMERICA.

REPORT OF CONSUL DUPRE.

The late President, General Barrios of Guatemala (as is President Menendez, of Salvador), was an earnest friend of the United States. Barrios, as does President Menendez, favored the assimilation of the institutions and business methods of his country to those of the United States. Barrios's ambition and the jealousy of his neighbors led to war with the little Republic of Salvador, which cost Guatemala a humiliating defeat and Barrios his life. Through his policy Americans were induced to invest in Guatemalan railways, banks, and coffee and sugar plantations. He projected and began the construction of a railway from the Bay of San Tomas, on the Caribbean Sea, to his capital, Guatemala City, a distance of 150 miles, there to connect with the existing narrow gauge of the Guatemala Central, 75 miles in length, terminating on the Pacific at the open roadstead of San José. Forty miles of Barrios's transcontinental road, from Puerto Barrios to Guatemala City, were half finished when his untimely death occurred.

Barrios's worthy successor, the vigorous President Barrillos, pursues the policy of his predecessor, favoring the construction of the transisthmian and other railways projected in Guatemala, and notably of that designed to connect the capitals of Guatemala and Mexico. In truth, General Barrillos and other Central American statesmen have not failed to discover that no Central American Union is desirable which may be pinned together with bayonets, and none desirable and enduring can be achieved save through the intervention of perfect interstate railway systems.

THE MESA OF SALVADOR.

Discovering, during a three days' sojourn at La Libertad, at the sea level in Salvador, how fatal to unacclimated persons was the breath of the sea at the very shore, drenched as it is each day by tides which leave heaps of shell and other fishes to rot instantly beneath the rays of the equatorial sun, and learning that Panama was thus made a grave-yard, because ships can not touch the shore, and passengers must inhale yellow death through weary deadly days and nights while tugs and lighters discharge tedious tasks—seeing and learning this at La Libertad nearly two years ago, I sought a perfect harbor on the Pacific coast whence to extend a railway to another on the Atlantic. It is the foul breath of the sea-shore at the sea level at points unswept by winds from boundless seas that makes the word "Panama" the synonym of pestilence and death. To avoid detention at the sea-shore in hot latitudes ships must anchor at wharves within land-locked harbors, whence passengers may be transferred instantly by railways to the mesa or elevated plateau from 2,000 to 3,000 feet above the sea level, and extending from one to the other ocean.

A CONFESSED FACT.

The Nicaragua Canal and the Ship Railway and De Lesseps Canal each and all are at the sea level. No soft, cooling wind from the Pa-

cific may find its way into either canal or follow gigantic locomotives tugging at ships crossing Tehuantepec, and the acclimated alone may cross the continent in safety at the sea level; but there is perfect immunity from climatic diseases the instant the traveler reaches an elevation of 1,000 feet above the sea. Commerce, therefore, will traverse the ship railway and the canal; men and women will prefer this transisthmian railway, having a perfectly land-locked harbor at each terminus and an elevation at no point after leaving the coast of less than 2,000 feet above the plane of the two oceans.

WONDERS OF THE INTERIOR.

Eighty miles from the harbor of La Union, going north through the greatest length of Salvador, the traveler will rest at the fathomless lake of Ilopango, 25 miles long and 8 to 10 miles wide. Its tepid waters occupy craters of extinct volcanoes. In 1870, when Salvador was shaken violently by earthquakes, the water of the lake sank in the night 9 feet, and along its shores were gathered earthen vessels curiously colored, and images carved out of porphyry, and others precisely like those at the museum at Washington taken from Egyptian tombs. A few miles southeast from the railway the ever-active volcano Izalco rises 6,000 feet, a perfect cone, from the plain about Armenia. The railway crosses the State of Sta Ana, a district of Salvador 50 miles square, producing, it is stated, more coffee than any equal area of land in the world. In truth, every acre of the *mesa* of Salvador is cultivated, each producing from two to four crops annually. The products are rice, tobacco, indigo, sea-island cotton, coffee, sugar, cocoa (chocolate), india-rubber, and Peruvian gum—so called because it was originally sent from Salvador to Peru and thence to European markets. The railway penetrates from La Union to Puerto Barrios or to Port Izabal, whichever harbor may be its northern terminus, a very paradise. The average density of population along the whole route exceeds 100 for each square mile. Here villages and towns are almost conterminous, and the population—Aztecs 92 per cent. and Spanish 8 per cent.—toil most industriously. Labor costs 20 to 25 cents, and food 10 cents per diem. The thatch-roofed, floorless adobe huts of the natives (Aztecs) are the cheapest possible, and only useful in protecting the occupants against rain-storms of July, August, and September (the rainy season), when the country is flooded almost every day. There is not a stove or fireplace in any house in the Republic; none are needed where the thermometer never falls below 70 or rises above 80 degrees. So great is the annual production of fruits, as well as of indigo, tobacco, sugar, and coffee, and so short the distance from Port Barrios to Mobile, that it is believed that most delicate and delicious tropical fruits, never seen in the United States, will be distributed everywhere from Mobile; and so redundant are crops of Salvador and of the districts of Guatemala penetrated by this railway that it must have two tracks—one for immense local, the other for interoceanic, freights and travel.

POLITICAL RESULTS.

But the great good to be achieved by this transisthmian road consists not so much in the fact that it will enable traveling multitudes to cross the continent where narrowest without possible danger from deadly fevers and plagues incident to detention at the sea-level, but,

with its branches, binding together these five Central American States in perfect political and social unity, it accomplishes their perfect *commercial* annexation to the United States. Puerto Barrios is within fifty hours or less of Dauphin's Island wharves at Mobile, and only sixty hours would be required to transfer a traveler or bale of goods from Mobile to the Pacific coast harbor of La Union. United States and other steamers now pay from $20 to $30 a ton at La Union for English or Australian coal. It may be delivered there from Alabama over the transisthmian railway for from $5 to $7 a ton. Therefore, the Government of the United States as well as the people must confess keen interest in this short, easily-built railway, which surely must accomplish most beneficent political and commercial results.

AMERICANS PREFERRED.

After the plan of the transisthmian railway was conceived and the details published, and after applications were made for charters in Salvador and Guatemala, English and French bankers and capitalists sought much the same concessions; but the Governments of Salvador and Guatemala both gave preference to the American applicant for these franchises. The Salvador charter conceded a monopoly for fifty years of the right of access to the matchless harbor of La Union. The cost of a double-track road from La Union to Port Izabal or Port Barrios, it is stated by engineers who have surveyed part and traversed the whole route of about 300 miles, will not exceed $35,000 a mile; there will not be a tunnel on the whole line, or a grade greater than 70 feet on any mile, and this only at each terminus, whence locomotives must climb, within 30 or 40 miles, to the mesa 2,000 feet above the sea.

The rapid multiplication of founderies, furnaces, and forges in Alabama and other Southern States induced the writer to seek, for the behoof of the commonwealth which is his home, an insatiable market for its products, to be found alone along the western shores of the three Americas. From every trading place of as many as 2,000 or 3,000 inhabitants along this interminable coast a railway will soon lead to farms and villages of the interior. Twelve such railways are now building between the southern confines of Chili and California. If the transisthmian railway be speedily finished, the iron and coal and steel of England and Australia may be supplanted everywhere on the Pacific by that produced in the United States.

L. J. DU PRÉ,
Consul.

UNITED STATES CONSULATE,
San Salvador, December 13, 1887.

TOBACCO INDUSTRY OF NEW SOUTH WALES.

REPORT BY CONSUL GRIFFIN.

Although tobacco has been grown for many years in various parts of Australia its cultivation is not likely to prove, at least for some time to come, any great source of profit to the country.

The quality of leaf thus far produced is very indifferent, and has a strong, rank taste and smell. At first these peculiarities were

attributed to a want of knowledge as to the proper methods of curing the leaf, but it now appears that there are other difficulties to overcome. Mr. Augustus Morris, the New South Wales executive commissioner to the International Exhibition at Philadelphia in 1876, was instructed by his Government, during his visit to the United States, to devote as much time as possible to the investigation of the various methods of cultivating tobacco and the curing of its leaf in that country.

The result of Mr. Morris's investigations were subsequently embodied in an exhaustive report on the subject, the publication of which attracted much attention in this colony.

DIFFICULTIES OF CULTIVATION.

Mr. Morris states in his report that he had paid particular attention to the growth of the plant in California, from the fact that the conditions under which it is grown there were similar to those in New South Wales and other portions of Australia. He argued that the difficulties which had been overcome in California could be overcome in the same way in Australia. He said that—

> The most experienced planters found, after growing their crops, that they were unable to do anything with the leaf. The sources of the failure lay, not in the properties of the leaf itself, but in the arid and desiccating atmosphere of a California autumn.

The same trouble exists in many parts of New South Wales, where it is difficult to remove from the leaf all its moisture before sufficient time elapses for the decomposition of the green coloring matter (*chlorophyl*); that is, the partial conversion of the starch into gum and sugar; the changes, in short, which, in a moister climate, take place naturally in the plant after it is cut and before it is dried. These are the changes which constitute curing as distingished from drying. Mr. Morris said:

> The wide range over which the plant is grown in the United States ought to assure the most skeptical that there is nothing in its own nature to exclude it from the soils and climate of Australia. From Wisconsin, with its intensely cold winter, to Florida, with its broiling summers, and from the rich lands of Missouri to the poor ones of Connecticut, it is a staple subject of husbandry.

Mr. Morris's prediction as to the extensive cultivation of tobacco in Australia is, however, no nearer being realized to-day than in 1877, when his report was published.

ACREAGE AND PRODUCTION.

The total tobacco product of the whole of the Australian colonies would not amount to 5,000,000 pounds per annum, and very nearly one-half of that is grown in New South Wales, Victoria taking the second place on the list.

In 1886 New South Wales had 1,603 acres and a product of 2,297,700 pounds. During the same period Victoria had 1,866 acres and a product of 1,538,208 pounds. The agricultural returns for 1887 show a falling off in the production of tobacco in both colonies. In 1887 New South Wales had 1,203 acres and a product of 1,527,904 pounds; Victoria 2,337 acres and a product of 1,527,000 pounds.

The subjoined table shows the number of acres in tobacco in New South Wales and Victoria and the quantity produced each year from 1880 to 1887, inclusive:

Year.	New South Wales.		Victoria.	
	Acres.	Produce.	Acres.	Produce.
		Pounds.		*Pounds.*
1880*	592	696,752	581	145,164
1881	1,791	2,180,525	1,990	1,941,296
1882	1,625	2,050,882	1,461	1,442,112
1883	1,815	1,964,480	1,313	685,370
1884	1,785	2,240,672	1,325	1,021,888
1885	1,046	1,110,366	1,402	884,016
1886	1,603	2,570,064	1,866	1,538,208
1887	1,208	1,527,904	2,337	1,527,000

* In 1880 the tobacco crop was a failure in many parts of Australia. G. W. G.

WHERE TOBACCO IS RAISED.

The bulk of New South Wales tobacco is grown between Tumut and Albury, in the south. Considerable quantities are also produced in the western district within a radius of about 50 miles of Bathurst. The plant was formerly extensively cultivated in the valley of the Hunter in the north, but of late years little attention has been given to it. The best tobacco produced in the colony is at Tumut, along the banks of the river of that name, where the soil is composed of rich alluvial deposits, and the growth not affected by change of seasons.

Tumut produced last year 739,500 pounds of leaf. Several tobacco factories are located in the district, one of which is in the town of Tumut. It is said, however, by agriculturists that the plant will grow all over the colony, especially on the river flats subject to inundations. The soil in the tobacco districts is seldom manured, and if there is no overflow it soon wears out.

The best tobacco in Victoria is grown in what is called the King River country, a mountainous district in the northeastern part of the colony. The land there is composed of rich loam, formed from the disintegration of slate and granite rocks. Mr. James Henly, a citizen of the United States, was the first to commence the cultivation of tobacco in that district, having obtained his seed from Kentucky and Virginia. Mr. Henly for a considerable period grew and manufactured his own tobacco, but the colonial legislature having passed an act requiring every manufacturer to take out a license at a cost of £150 ($729.99) per annum, he was forced to abandon the manufacture and devote his time to the cultivation of the leaf. He found that his land yielded, upon an average, from 1,000 to 1,500 pounds of tobacco per acre. He noticed that the young plants were subject to blue mold, and the leaf frequently injured by frost before matured. Its growth was also impaired by hail and rain storms. Mr. Henly says that the crop may be regarded as precarious not only on the King River district, but in other portions of Australia. He does not think that an average crop can be gathered in any portion of the great island-continent more than once in every three or four years. The season of 1887 being a good one, the tobacco crop amounted to about 250 tons in the King River district.

LABOR EMPLOYED.

The labor employed in tobacco culture in Australia is now almost exclusively Chinese, the Europeans fighting shy of the industry on account of the uncertainty of the crops. Mr. Hugh Dixon, the senior partner in the Conqueror Tobacco Works of Sydney, to whom I am indebted for much valuable information in regard to the industry, is of the opinion that tobacco culture at present can not be made to pay with European labor in Australia. He says that "whenever the leaf is grown by Europeans it is inferior to that of the Chinamen, from the fact that the former will not take the pains to cultivate it properly." Mr. Dixon says further, that there has been a great improvement in the quality of the Australian leaf during the last twenty years, but it is still far inferior to the American, and the latter will always be preferred by those who can afford to use it. The truth is, there is no bright-colored tobacco grown in any part of Australia, and Mr. Dixon admits that his best brands of tobacco, such as the "Champion," are made wholly of American leaf.

DIFFERENCE BETWEEN COLONIAL AND AMERICAN TOBACCO.

Mr. Angus Mackay, agricultural instructor in the Technical College at Sydney, in reply to some interrogatories of mine, promptly placed at my disposal a number of interesting and valuable notes hitherto unpublished, embodying his observations and experiences with the tobacco plant in various parts of Australia. Mr. Mackay, in a letter transmitting his notes to me under date of the 3d instant, expresses his obligations to Professors Johnston and Wilson and the Orange Judd Tobacco Company and other experts for information in regard to tobacco in the United States which was especially valuable to him for comparative purposes.

From Mr. Mackay's notes I learn that tobacco is an old crop in Australia, the seed having been brought here by the first settlers. Tobacco was grown on land belonging to the Australian Agricultural Company, near Stroud, 144 miles north of Sydney, as far back as 1826, the year in which a fee-simple grant of land of 464,640 acres was made to that company. In those early days from 1,200 to 1,800 pounds per acre of leaf were obtained. Tobacco is still grown there, but in small quantities. The yield now seldom reaches 1,000 pounds per acre except on new land, or that which has had a long rest. On new land, near Mudgee, very fair returns are obtained, but in most cases, with scarcely an exception, the returns fall off after the third or fourth cropping. There is a notable exception to this rule in the case of the very rich alluvial soil of volcanic origin in Tumut, the district referred to in a former part of this report. There tobacco has been grown for many years, and the yield keeps up in a manner that is surprising until explanation is afforded through the analysis of the soil. The crop is one of the most exhausting upon land. In that respect there is little difference in what it takes from the soil here and what the American leaf is found to contain.

Mr. Mackay is at present working out three analyses of leaf grown in New South Wales, in the Tumut, Hunter River, and Mudgee districts. The varieties, so far as he can get at them, are Virginian leaf from the Tumut and Hunter River district, and the "Yarra" from Mudgee. Mr. Mackay says:

> I find some difficulty in locating the exact varieties, because Australian buyers do not, as a rule, put much store upon the variety. They buy the leaf for its

quality, that is about the gauge of the average purchaser. All the leaf mentioned was dry and in the form of bands when I got it, hence I can not speak more definitely of the varieties.

Mr. Mackay found that the average proportion of ash from the dry leaf from Tumut was 26.25, Hunter River, 28.40, and Mudgee 20.15; the latter, he says, had been touched by frost and was materially deficient in "life" or "body," which gives toughness or quality to tobacco. The main object of the analysis was to get at the proportion of potash, lime, and silica in comparison with the American Virginia leaf, which he had been testing. The proportions were: *Potash*, Tumut, 25.20; Hunter River, 27.40, and Mudgee, 9.00. *Lime*, Tumut, 30.00; Hunter River, 25.90, and Mudgee, 10.18. *Silica*, Tumut, 13.20; Hunter River, 14.10. and Mudgee, 19.05. The Virginia leaf received from Charleston, S. C., yielded, potash, 27.04; lime, 37.00; silica, 12.10. Mr. Mackay says:

Possibly these figures will be of more concern to those who take a scientific interest in the subject than to others, but so far as my investigations and experiences in tobacco production here go, they present the key of the whole situation. * * * The proportion of alkali and alkaline earth in the crop everywhere (or where the quality is good enough for manufacturing purposes) is excessive. Now, after over one hundred analyses of soil from various parts of Australia, I can say that alkalies are a defective quality all over. If an exception to this conclusion could be made it would be in the Tumut soil, but potash is not abundant even there.

Mr. Mackay says further:

Unless the tobacco land is refreshed by the sediment of floods or by a proper system of tobacco culture and use of the needed fertilizers, which I am trying to bring to the notice of growers, even the very rich plains about Tumut must give out.

MANNER OF CULTIVATION.

The cultivation, as followed here, is much the same as in the United States and the West Indies. The main difference is in the harvesting. Here too much dependence is placed upon the climate. Mr. Mackay thinks it has been a misfortune to the country, in a farming sense, that the climate is so good for relying upon that very little effort is made to house and cure the leaf in proper barns. With one or two exceptions all the barns he had seen were unworthy of the name, and the result is that large proportions of every crop are wasted between the time of cutting and getting the leaf to market.

Mr. Mackay concludes his notes with the statement that—

Tobacco is not likely to become an article of export from these colonies until more attention is paid by growers to fertilizing their land and in housing and curing the leaf.

It is well to mention here that, Australia being south of the equator, the seasons are reversed, and sowing-time in New South Wales and Victoria begins during the months of May and June instead of in December and January. The plants are set out in July, August, and September, and the crops harvested in March and April.

The average price of the colonial leaf is from 5*d*. (10 cents) to 6*d*. (12 cents) per pound. This year, on account of the short crop, it will bring from 7½*d*. (15 cents) to 8*d*. (16 cents) per pound. Colonial leaf has, however, been sold as low as 1*d*. (2 cents) per pound. When I arrived here several years ago I saw a lot of it on the wharf which had been offered at 2*d*. (4 cents) per pound without a buyer. The inferior quality of the leaf and the high duties charged on it in Victoria and other colonies prevent it from becoming an article of export. The duty on imported leaf in New South Wales is 3*s*. (73 cents) per pound, except when imported for manufacturing pur-

poses; then it is only 1*s.* (24 cents) per pound. A much greater quantity of the colonial leaf is now used by the New South Wales factories than formerly. The change is not to be attributed to any improvement in the quality, but to the low price at which it can be purchased.

In my report on the tariff of New South Wales, transmitted to the Department of State under date of the 8th of August last, I directed attention to the fact that the Government here had increased the excise tax on tobacco from 1*s.* (24 cents) to 1*s.* 3*d.* (30 cents) per pound, for the reason that when the tax was first levied it was expected that manufacturers would use the colonial and imported leaf in equal proportions. The Government treasurer stated that—

Manufacturers, instead of doing this, used only 1 pound of imported leaf to every 3 pounds of colonial leaf, and the revenue had in consequence declined from year to year. The Government failing to obtain the revenue from the leaf, it was only just that it should get it from the tobacco.

Should the new excise tax induce manufacturers to use more of the imported leaf, a decided improvement would soon be noticed in the quality of their products. Out of 2,044,000 pounds of tobacco manufactured in New South Wales during the year 1886 more than three-fourths consisted of colonial leaf, the exact figures being 1,536,084 pounds colonial leaf and 507,916 pounds imported leaf.

COLONIAL TOBACCO FACTORIES.

There are 17 tobacco and 9 cigar and cigarette factories in New South Wales, all of which furnish employment to 680 hands, 144 of whom are females. The estimated horse-power of the machinery in these establishments is 120, and the value of the plant is $322,750. These establishments manufactured, during 1886, 2,044,240 pounds of tobacco, valued at $1,533,180; cigars, 7,125 pounds, valued at $21,375; and cigarettes, 5,340 pounds, valued at $12,015. These returns show a decrease of 88,928 pounds of tobacco, 2,277 pounds of cigars, and 1,561 pounds of cigarettes over those of 1885. The factories during 1886 used 1,853,407 pounds of colonial leaf and 561,514 pounds of imported, against 1,825,854 pounds of colonial leaf and 672,485 pounds imported for the year 1885.

The subjoined table shows the number of tobacco factories in the colony of New South Wales during the years 1885 and 1886, together with the number of hands employed, value of plant, amount of horse-power, quantity of material used and manufactured for each year:

Year.	Tobacco factories.	Cigar and cigarette factories.	Hands employed.		Value of plant.	Horse-power of machinery.	Tobacco leaf used.		Tobacco, cigars, and cigarettes manufactured.		
			Male.	Female.			Colonial leaf.	Imported leaf.	Article.	Quantity.	Value.
					Dollars.		*Pounds.*	*Pounds.*		*Pounds.*	*Dollars.*
1885	16	9	411	257	314,900	120	1,825,854	672,485	Tobacco	2,133,168	1,599,875
									Cigars	9,402	28,205
									Cigarettes	6,901	15,525
1886	17	9	530	144	322,750	120	1,853,407	561,514	Tobacco	2,044,240	1,533,180
									Cigars	7,125	21,375
									Cigarettes	5,340	12,015

Messrs. Cameron Brothers, Virginia Tobacco Works, Sussex street, Sydney, Messrs. Dixon & Sons, Conqueror Tobacco Works, corner

Park and Elizabeth streets, Sydney, and the Saywell Tobacco Company, limited, 237–239 Clarence street, Sydney, are the three leading establishments in Australia.

Messrs. Cameron Brothers have branch factories in Melbourne, Victoria, and Adelaide, South Australia. Messrs. Dixon & Sons also have a branch at Melbourne. The latter firm was probably the first to commence the industry, its connection with it dating as far back as 1839, the date of the arrival of the founder of the firm in the colony, the late Mr. Hugh Dixon, who came to Sydney especially for the purpose of manufacturing tobacco. Mr. Dixon died in 1880 and his son, the present head of the firm, succeeded to the business.

Especial mention should be made of the factory of Messrs. Wolfe, Gorrick & Co., of West Maitland, which is also one of the oldest factories in the colony. That establishment seems to have begun operations in 1840, and Mr. Thomas Buxton, the present manager, has been connected with the firm ever since its foundation. The factory is in the western part of Maitland, the second most important town in the colony, and 93 miles from Sydney. The trade of Messrs. Wolfe, Gorrick & Co. is principally with Newcastle and Sydney. They give employment to 26 hands; previous to the imposition of the excise tax they had more than double that number. The manager stated recently to a reporter of the Sydney Morning Herald that the tax was doing the industry harm in every part of the colony. When asked if protection would aid the matter his answer was decidedly in the negative. He said:

> More protection—that is, higher import duties on the foreign leaf—would place the trade in a far worse condition than at present. There are people so "protection mad" that they would put 5*s.* ($1.21) per cwt. on potatoes. What is wanted is the removal or the modification of the excise duty.

The products of this factory have received as many as fifty prizes and certificates from various exhibitions, inclusive of one from the Intercolonial Exhibition at Sydney. The following list comprises all the brands turned out by the factory: The Prizetaker eighteen twist, dark; the Limerick ten twist, dark; the O. K. ten, six, and five cake, dark. American leaf: The Rosebud twist twenties, dark; the Homespun twist tens, dark; the Bright twist tens, dark; the Meteor ten cake, light; the Star of Virginia ten cake, dark, and the Snider Rifle in cut tobacco.

PRICES OF TOBACCO.

The principal brands of Cameron Brothers' Virginia Factory at Sydney are the Raven Negrohead twenty-twos and the Raven Navy twist twelves; the wholesale price of each of these, exclusive of the excise duty of 1*s.* 3*d.* (30 cents), is 3*s.* (73 cents) per pound. The Orion and Pathfinder are 2*s.* 6*d.* (60 cents) per pound. Dark Cavendish, such as the Signet, Lion, Conquest, and Havelock, vary between 2*s.* (48 cents) and 2*s.* 9*d.* (66 cents), exclusive of excise duty. Their Nail Rods, Two Seas, etc., bring, exclusive of excise duty, 3*s.* 1*d.* (75 cents) per pound wholesale. Their Aromatics, Canary Bird twist sixes, Bars sixes and twelves, Pocket Pieces twelves, Twin Blocks fours and sixes, sell wholesale, in 25-pound caddies, at 3*s.* 5*d.* (83 cents) per pound, to which must be added the excise tax, 1*s.* 3*d.* (30 cents) per pound. Their cut tobaccos, Emperor of Germany one-quarter pound tins mixture, Rough Cut, Raven 5-pound parcels, sell at 4*s.* (97 cents) per pound; Cameron's Cut Cavendish,

Charmer mixture, Loose Aromatic Long Cut, and Rough Cut, sell wholesale at 3*s.* 6*d.* (85 cents) per pound, exclusive of excise duty.

Messrs. Cameron Brothers experienced many difficulties in establishing the industry here. A representative of the firm paid several visits to Australia before they ordered the construction of their factory at Sydney in 1873. This splendid establishment, erected at a cost of $500,000, was wholly destroyed by fire in September, 1886, but in a few months a larger and finer building was erected in its place on Sussex street. The products of their new factory are becoming more and more popular. The present manager of the Sydney branch is Mr. Alexander Cameron, and, although a very young man, he has infused a wonderful amount of energy into the business. His abilities are of a very high order, and he is quoted everywhere in Australia as an authority on tobacco. One secret of their success in Australia is the advantage they possess of having all their American leaf selected and cured by their firms in Richmond and Petersburgh, Va. They seem determined that their Australian products shall be worthy of the world-wide reputation of their firm. They carried off the first prizes at the Sydney and Melbourne Intercolonial Exhibitions, and their products at the latter exhibition were the only ones deemed worthy of a gold medal and of the Emperor of Germany's special prize of 1,000 guineas.

The leading brands of the Conqueror Tobacco Works are the Champion (bright tobacco), Yankee Doodle, Conqueror, Sir Roger, Challenge, and Ben Bolt, in dark tobaccos. The prices of these are about the same as those of similar brands of Cameron Brothers. The leading brands of the Saywell Tobacco Company Limited are: Bright Aromatic; pocket pieces, Bright Flat, Ruby Twist, Gold Bars, Dark Twists, Negrohead, Eagle, Defiance, Dark Flat or Plug Eureka, I X L Navy, The Boss Navy, and Orient Navy; cut tobaccos, Rough-Cut Ruby, Straight Cut, Gold Leaf Mixture, Barnett's Twist, Cavendish, Bird's Eye, etc.

The company also manufacture a number of popular brands of cigars and cigarettes.

IMPORTS.

The total quantity of all kinds of tobacco, cigars, cigarettes, and snuff imported into the colony of New South Wales during the year 1886 was 2,253,497 pounds, valued at $1,104,480, against 1,831,386 pounds, valued at $923,210, for 1885, showing an increase in quantity of 422,129 pounds and in value $171,270 for 1886. Of the imports for 1886 there were 1,384,036 pounds of manufactured tobacco, valued at $475,590, and 507,916 pounds of unmanufactured, valued at $161,840; cigars, 310,694 pounds, valued at $374,760; cigarettes, 49,923 pounds, valued at $91,325, and snuff, 928 pounds, valued at $965. The increase consisted principally in manufactured tobacco, which showed an increase of 428,977 pounds in quantity and $130,014 in value. The unmanufactured or leaf tobacco declined from 516,951 pounds in 1885 to 507,916 pounds in 1886. Cigars declined during the same period from 317,995 pounds to 310,694 pounds. Cigarettes, however, increased from 40,593 pounds in 1885 to 49,923 pounds in 1886, and snuff 770 pounds to 928 pounds.

The subjoined table shows the quantity and value of all kinds of tobacco, cigars, cigarettes, and snuff imported into New South Wales for each year from 1877 to 1886, inclusive:

Kind.	1877.		1878.	
	Quantity.	Value.	Quantity.	Value.
	Pounds.		*Pounds.*	
Manufactured	653,751	$236,655	1,030,063	$405,440
Unmanufactured	1,610,989	366,460	2,448,104	463,225
Total	2,264,740	603,115	3,478,167	868,665
Cigars	114,253	194,750	184,149	262,505
Cigarettes				
Snuff	42	165	502	370

Kind.	1879.		1880.	
	Quantity.	Value.	Quantity.	Value.
	Pounds.		*Pounds.*	
Manufactured	755,049	$257,970	525,539	$173,145
Unmanufactured	202,589	38,085	477,610	86,840
Total	957,638	296,055	1,003,149	259,985
Cigars	122,829	167,040	107,105	157,250
Cigarettes				
Snuff	1,227	660	903	1,105

Kind.	1881.		1882.	
	Quantity.	Value.	Quantity.	Value.
	Pounds.		*Pounds.*	
Manufactured	613,868	$229,545	928,152	$323,955
Unmanufactured	1,035,243	186,750	1,222,594	229,245
Total	1,649,111	416,295	2,150,746	553,200
Cigars	250,960	336,825	220,023	302,570
Cigarettes				
Snuff	299	320	744	500

Kind.	1883.		1884.	
	Quantity.	Value.	Quantity.	Value.
	Pounds.		*Pounds.*	
Manufactured	949,448	$299,825	765,447	$238,345
Unmanufactured	856,066	175,540	871,416	178,720
Total	1,805,514	475,365	1,636,863	477,065
Cigars	336,267	445,025	298,581	330,260
Cigarettes			16,411	31,280
Snuff	774	870	758	370

Kind.	1885.		1886.	
	Quantity.	Value.	Quantity.	Value.
	Pounds.		*Pounds.*	
Manufactured	955,059	$345,585	1,384,086	$475,590
Unmanufactured	516,951	121,540	507,916	161,840
Total	1,472,010	467,125	1,891,952	637,430
Cigars	317,995	381,795	310,694	374,760
Cigarettes	40,593	73,690	49,923	91,325
Snuff	770	000	928	965

The bulk of these imports consists of American tobacco, the unmanufactured being almost exclusively the product of that country. The actual quantity of American tobacco consumed in the colony does not show in the returns, for a considerable proportion is shipped by way of London, and is entered as British produce. The direct shipments from the United States during the year 1886 amounted to 1,083,852 pounds, valued at $346,695, against 846,815 pounds, valued at $249,660, for 1885. The subjoined table shows the quantity and value of the direct imports of all kinds of tobacco, cigars, cigarettes, and snuff into New South Wales for 1885 and 1886, together with the names of the countries whence imported:

Countries.	Kind.	1885.		1886.	
		Quantity.	Value.	Quantity.	Value.
		Pounds.		*Pounds.*	
Great Britain	Manufactured	369,019	$140,625	563,317	$215,090
	Leaf	61,672	14,495	97,493	16,905
	Total	430,691	155,070	660,810	231,995
	Cigars	34,605	75,080	43,595	82,125
	Cigarettes	27,015	49,590	41,346	70,175
	Snuff	559	480	289	265
Victoria	Manufactured	129,666	49,075	78,108	32,960
	Leaf	6,006	1,560	8,139	2,910
	Total	135,672	50,635	86,247	35,770
	Cigars	21,401	39,650	23,965	35,510
	Cigarettes	2,808	5,510	1,443	4,195
	Snuff	210	115	153	230
South Australia	Manufactured	41,028	17,985	46,467	23,870
	Leaf	3,379	950	.....	.....
	Total	44,407	18,935	.....	.....
	Cigars	2,822	8,190	4,668	5,980
	Cigarettes	180	725	261	680
	Snuff	1	5	6	20
United States	Manufactured	390,501	127,245	678,933	190,825
	Leaf	445,734	104,565	398,590	141,030
	Total	836,235	231,810	1,077,523	331,855
	Cigars	1,000	2,005	1,313	4,240
	Cigarettes	9,381	15,730	4,536	10,150
	Snuff	.....	.....	480	450
Fiji	Manufactured	5,137	1,700	190	40
	Leaf	60	10	.....	.....
	Total	5,197	1,710	.....	.....
	Cigars	71	150	194	295
Germany	Manufactured	1,645	595	405	340
	Leaf	100	20	627	225
	Total	1,745	615	1,032	565
	Cigars	58,147	78,730	61,654	78,975
	Cigarettes	734	1,340	946	2,650
Queensland	Manufactured	7,835	2,775	660	295
	Leaf	.....	.....	827	310
	Total	.....	.....	1,487	605
	Cigars	312	975	2,540	3,895
	Cigarettes	122	220	813	1,895
New Zealand	Manufactured	320	120	275	85
	Cigars	775	1,280	1,050	2,130
	Cigarettes	300	450	125	240

Countries.	Kind.	1885.		1886.	
		Quantity.	Value.	Quantity.	Value.
		Pounds.		*Pounds.*	
Tasmania	Manufactured	78	$45	1,508	$500
	Cigars	32	100		
Hong-Kong	Manufactured	7,688	2,425	13,068	5,175
	Cigars	175,422	147,700	126,258	250,210
India	Manufactured	150	50		
	Cigars	844	1,925	689	920
China	Manufactured	350	100	701	435
	Cigars	5,537	6,310	7,708	7,315
South Sea Islands	Manufactured	1,406	625		
Kaiser Wilhelm Land	do	736	200		
Singapore	Cigars	54	100	15	40
Mauritius	do	11	15		
France	Manufactured			200	125
	Cigars	8,249	9,785	38,515	41,650
	Cigarettes			418	1,240
New Caledonia	Cigars	75	100	504	800
Belgium	do	5,222	6,010	8,016	11,175
Philippine Islands	do	3,300	2,450		
Italy	do	116	150		
Egypt	Cigarettes	58	125	15	40

EXPORTS.

It must not be inferred however that all the tobacco entered at the customs here is consumed in the colony, for no inconsiderable proportion is re-exported. During the year 1886 the total quantity of all kinds of tobacco exported from the colony amounted to 632,893 pounds, valued at $299,810, against 810,906 pounds, valued at $361,895 for 1885. The whole of the exports of 1885 consisted of foreign produce, but in 1886, 576 pounds of colonial leaf, valued at $245, were exported. Of the exports of foreign tobacco for 1886 Victoria received 88,548 pounds, valued at $52,350; New Zealand, 21,702 pounds, valued at $14,413; Queensland, 232,278 pounds, valued at $122,360; New Caledonia, 85,772 pounds, valued at $31,260, and the remainder to Tasmania, South Australia, Western Australia, Fiji, and the neighboring islands.

AMERICAN TOBACCO.

Nearly all the leading American tobacco factories are represented in Australia. The popular brands of T. C. Williams & Co., of Richmond, Va., such as the Imperial Ruby Twist, Welcome Nugget, Victory, Golden Eagle, and Nectar Leaf, are quite as well known here as in the United States. The sale of T. C. Williams & Co.'s tobaccos was at first limited on account of their light color and mild flavor, as the Australians for many years exhibited a decided preference for dark colored, strongly flavored tobacco, but now the taste is changing, especially in the large cities and towns, where there is a steadily increasing demand for bright, mild tobaccos. In dark colored imported tobaccos the products of Messrs. Cameron Brothers seem to be preferred to all others; the Two Seas and Imperial being the leading brands. Messrs. Cameron Brothers' branch factory here manufactured the same brands out of the American leaf, and although they are said to be made in precisely the same way and out of the same tobacco, the imported brands are much more popular notwithstanding the lower price of the colonial product. There are a number of other American tobaccos very popular here, and

amongst them mention should be made of D. B. Tennant & Co.'s Derby, Watson & McGill's Black Swan, and W. T. Blackwell & Co.'s Durham, the last of which is made from the leaf grown in the celebrated golden tobacco belt of Durham, N. C.

G. W. GRIFFIN,
Consul.

UNITED STATES CONSULATE,
Sydney, New South Wales, October 4, 1887.

FRUIT TRADE OF NEW SOUTH WALES.

REPORT BY CONSUL GRIFFIN.

Although there are few countries in the world better adapted to the growth of all kinds of fruit than New South Wales, the colony has thus far, with the single exception of oranges, been unable to grow a sufficient quantity of fruit for home consumption, much less for export.

The chief obstacle in the way is the difficulty in obtaining land for fruit culture, or for any other purpose except that of sheep farming upon favorable terms. Another obstacle is the high cost of freight and a want of knowledge as to the best means of gathering, packing, and shipping fruit to market. Moreover, the farmers seem to have made up their minds that the country is better suited to rearing sheep than any thing else, and when engaged in other kinds of farming they persist in following the old beaten tracks with which they are familiar. Very few ever think of growing more than one or two kinds of crops, and it stands to reason and common sense that when a farmer's dependence is placed entirely upon cereals or hay crops his returns must always be uncertain, on account of the drought, rust, and other causes, and even if such were not the case, the local demands for cereals are always more or less limited, and after they have been supplied the surplus must find an outside market where the competition is keen. In order to grow fruit successfully in the interior districts of Australia, it will be necessary to adopt a system of irrigation similar to that employed in the dry districts of California and in other States of the Union on the Pacific coast. On the distant plains of Australia, where the rain-fall does not average more than six or eight inches per annum, water would have to be obtained by some artificial system.

In the country on the western slopes of the mountain ranges irrigation would not be needed, for in those districts apples, pears, peaches, grapes, plums, strawberries, gooseberries, quinces, oranges, and lemons will grow to perfection.

IMPORTS OF FRUIT.

The value of the various kinds of fruit imported into the colony of New South Wales during the year 1886 was $1,540,985, against $1,380,000 for the year 1885 and $791,915 for 1877. Of the imports for 1886, $886,580 consisted of green or fresh fruit and $509,145 of dried fruit, $137,070 of canned or tinned fruit, and $14,190 of bottled fruit.

The subjoined table shows the value of all kinds of fruit imported into New South Wales for each year from 1887 to 1886, inclusive.

Year.	Value.	Year.	Value.
1877	$791,915	1882	$1,069,670
1878	694,595	1883	1,186,795
1879	602,825	1884	1,454,581
1880	696,365	1885	1,380,000
1881	1,055,865	1886	1,540,985

The annual value of the imports of fresh fruit has more than doubled during the last few years. The bulk of the supply is from Tasmania. The quantity imported from that colony during the year 1886 was 238,972 cases, valued at $468,610, against 221,679 cases, valued at $435,965, for the year 1885.

The subjoined table shows the quantity and value of the imports of fresh or green fruits into the colony of New South Wales for the years 1885 and 1886, with the names of the countries whence imported:

Country.	1885.		1886.	
	Quantity.	Value.	Quantity.	Value.
	Cases.	*Dollars.*	*Cases.*	*Dollars.*
Victoria	61,537	104,505	72,451	186,325
South Australia	2,580	9,395	4,780	12,425
Queensland	16,374	41,475	71,591	101,660
Tasmania	221,679	435,965	238,927	468,610
New Zealand	9,467	14,360	8,827	8,825
Fiji	211,597	187,630	173,010	141,170
United States	40,024	96,160	6,555	13,050
New Caledonia	2,084	2,770	672	1,390
Hong-Kong	88	255	101	185
China	2	10	.....	.....
South Sea Islands	.....	.....	4,472	2,310
Italy	.....	.....	130	585
India	.....	.....	60	45

Tasmania and Victoria furnish the bulk of the apples and pears, and Queensland and Fiji the tropical fruits, such as bananas and pine-apples. The imports of apples from the United States declined from 40,024 cases, valued at $96,160, in 1885, to 6,565 cases, valued at $13,050, in 1886. The cause of the decline is attributed to the steadily increasing demand for California fruits in the eastern markets. Another reason is that much of the California fruit for 1885 was affected with the codling-moth, and although the shipments which followed later in the season were wholly free from any thing of the kind, dealers were somewhat shy of ordering large supplies in 1886. I am informed, however, that the shipments for the present year are likely to be larger than usual, especially if the forthcoming crop in California and Oregon should turn out to be a good one.

There is no reason why the fruit trade with the United States should not increase in the near future to very large proportions. Australia being south of the equator, the seasons are directly opposite to those of California, and when fruit is very scarce here it is most abundant there. The attention of the Oceanic Steamship Company has been recently directed to the importancc of this trade, and it is said that arrangements have been perfected by which fruit can be brought here at lower rates and in better condition than formerly. The steamship company, it is also said, have determined to shorten

the journey between San Francisco and this port by accelerating the speed of their vessels.

TINNED AND BOTTLED FRUIT.

The bulk of tinned or canned fruit imported into New South Wales is of American manufacture. The neighboring colonies have not been able to supply the home demand. Fruit suitable for tinning is of too high a cost to admit of the industry being profitable here for some time to come. All the principal American manufacturers are represented here, and the various brands of the Cutting Packing Company, W. T. Coleman & Co., and many others are quite as well known in Australia as in the United States. Indeed, there are no other kinds of preserved fruits, except those imported in bottles from Great Britain, which enter into serious competition with the American. The Australians have always been very partial to English bottled fruit, and there is no doubt that the imports are of excellent quality, but they are much more expensive than the tinned fruits, and do not come within the reach of the poorer classes. Besides the additional cost of packing fruits in bottles, there is always a heavy loss attending their shipment through breakages.

A number of American manufacturers have recently introduced into Australia various kinds of fruits put up in bottles, but they have not as yet become sufficiently known to offer serious opposition to the English fruits. The American bottled fruits are of excellent quality and flavor, but the trade in fruit put up in glass will always be limited, on account of the heavy cost connected with it. The imports of all kinds of tinned and preserved fruits imported into New South Wales during 1886, exclusive of jams and jellies, amounted to 1,198,644 pounds, valued at $137,070, against 1,281,901 pounds, valued at $181,565, for the year 1885; showing a decline in quantity of 83,257 pounds and in value of $44,495 for 1886. The following table shows the quantity and value of the imports for each year from 1880 to 1886, inclusive:

Quantity and value of all kinds of tinned and preserved fruits, exclusive of jams and jellies, imported into New South Wales for each year from 1880 *to* 1886, *inclusive.*

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Pounds.			*Pounds.*	
1880	301,175	$51,160	1884	1,127,891	171,255
1881	614,145	97,435	1885	1,281,901	181,565
1882	1,120,095	178,180	1886	1,198,644	137,070
1883	882,995	131,758			

Imports for 1886.

Countries.	Quantity.	Value.	Countries.	Quantity.	Value.
	Pounds.			*Pounds.*	
Great Britain	545,595	$53,160	China	3,210	$570
United States	483,696	48,375	Singapore	6,576	740
Hong Kong	79,253	11,445	Fiji	5,216	605
Victoria	53,150	5,845	France	2,784	490
South Australia	66,258	8,940	Germany	144	65
Queensland	45,375	5,380	Italy	3,016	255
India	4,375	1,000			

The value of the imports from the United States for 1886 were not as large as those of 1885 by nearly 50 per cent., the exact figures being $48,375 for 1886, and $85,795 for 1885. Considerable quantities of American fruits reach here by way of London and do not show in the returns, for when shipped that way they are entered as British produce.

The following table shows the direct imports of preserved or tinned fruit from the United States for each year from 1880 to 1886, inclusive:

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Pounds.			*Pounds.*	
1880	40,244	$6,130	1884	333,180	$48,804
1881	175,020	23,580	1885	611,119	83,504
1882	340,490	48,805	1886	483,606	48,875
1883	266,307	36,905			

The imports of American tinned fruits would be very much larger than at present if it were not for the custom duty of 2*d.* (4 cents) per pound charged upon such imports.

RAISINS.

A number of American firms have recently introduced here one or two brands of California raisins, the quality of which is said to be the best ever brought to this market. Mr. Charles Markell, of Boston, Mass., who has given much study to the condition of the fruit trade of this colony, informs me that nothing stands in the way of the enlargement of the trade in American raisins except the method of packing them.

He says "that they should be packed in air-tight cases similar to those brought from Spain." He says further "that the products of the Fresno Raisin and Fruit Packing Company have attracted more attention here than any other."

JAMS AND JELLIES.

The jams and jellies made in the colonies are greatly inferior to those imported from the United States and Europe. The principal supply of this market comes from Tasmania.

The duty charged on jams and jellies is 1*d.* (2 cents) per pound, and is applied equally to the imports from the neighboring colonies as to those from the United States and Europe, but the Tasmania product is much cheaper than the American.

The Sydney market appears to be glutted with colonial jams, and, notwithstanding their low price, I wonder why the people use them, as the greater portion is almost wholly destitute of flavor, and, moreover, it is the most unsightly substance ever sold under the name of fruit.

The total value of the imports of jams and jellies into New South Wales for the year 1886 was $365,505, against $496,605 for the year 1885. The subjoined table shows the imports for each year since 1877.

Quantity and value of jams and jellies imported into New South Wales for each year from 1877 to 1886, inclusive.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Pounds.			*Pounds.*	
1877	2,654,422	$388,430	1882	4,664,455	$630,880
1878	2,738,561	403,885	1883	4,810,945	588,285
1879	2,509,385	346,215	1884	4,121,944	508,510
1880	2,491,585	329,745	1885	3,795,774	426,605
1881	3,150,769	427,653	1886	3,876,060	366,505

Imports for 1886.

Countries.	Quantity.	Value.	Countries.	Quantity.	Value.
	Pounds.			*Pounds.*	
Tasmania	1,915,795	$168,800	New Zealand	4,910	$535
Great Britain	909,480	98,515	United States	6,100	480
Victoria	510,914	44,895	Hong-Kong	96	10
South Australia	511,612	50,205	India	72	80
Queensland	19,125	2,085			

AUSTRALIAN FRUITS.

In the southern portion of Australia there are few indigenous fruits. A miserable little cherry with the seed outside, a diminutive wild grape in the mountains, and a few unimportant nuts form the list of native fruits of the southern part of the great island continent. In the north, however, the case is altogether different, for the pineapple, banana, cocoanut, and many other kinds of fruits are found to be indigenous.

Mr. James Harold, of this city, to whom I am indebted for much of the material of this report, is of opinion that southern Australia was not originally destitute of fruit, and accounts for its disappearance through the neglect of the aboriginal inhabitants, who, perhaps, represent the lowest forms of human life on the face of the earth. He says that—

> They made their appearance after the creation of the vegetable kingdom, and as their intellects were of very feeble order they could not understand the propagation or cultivation of fruit.

Almost all the European fruits that have been introduced here grow extremely well, and there is reason to believe that in the near future the cultivation of fruit will become one of the most important industries of Australia.

With the exception of the grape the orange is the most profitable fruit cultivated in New South Wales, and it is said on high authority that the orange trees of the Paramatta district are the largest and finest in the world. They appear to have been planted there soon after the foundation of the colony. Some of the trees are known to be over sixty years of age, and they are still in the full vigor of life and look as if they would last a century longer. They are certainly not less than 40 or 50 feet in height, and measure nearly 6 feet in circumference. Some idea of their productiveness can be formed from a recent statement that over 10,000 oranges had been gathered from a single tree in one season.

The principal variety of oranges grown in Australia is known as the Parramatta, or Poor Man's Orange. It is the common Rio or-

ange, and came here from Rio Janeiro in the early days of the colony. The variety known as the Navel does extremely well in various parts of the colony, and sells for more than double the price of the Parramatta, but it is not extensively cultivated. It thrives best on the loamy banks of rivers, with water in easy reach of their tap-roots, so that they can spread out afar their network of lateral rootlets through a warm, friable surface-mold. The tree was brought here from Batavia, and was subsequently introduced into California as the Australian Navel, where it was rechristened as the Washington Navel and the Riverside Navel. Nearly all the varieties of the mandarin or Chinese orange thrive in New South Wales, and especially along the Hawkesbury River. Land suitable for orange groves can be obtained between Gosford and Newcastle for from $50 to $75 per acre, and between Parramatta and Windsor from $100 to $150 per acre. In the neighborhood of Gordon, said to be the best orange district in the colony, it costs between $200 and $250 per acre. The estimated cost of fencing, clearing, plowing, and planting is $125 per acre. The trees begin to bear the fourth or fifth year. Mr. W. H. McKeown, of "Rosevilla," Gordon, writes me under date of the 7th instant that he realized from his orange groves this year fully $250 per acre, and that table grapes grow to perfection in his neighborhood. From the first cutting he obtained fruit to the value of $500 per acre. The ground was trenched about 2 feet and cost from $1 to $1.12½ per rod. Grapes for wine appear to do better in the interior than along the coast, as the rain-fall on the coast is apt to disturb the vintage.

The peach will also grow to perfection in Australia, and especially in New South Wales. The Royal George is the most valuable variety that has as yet come under my observation here. It has, however, a different name in almost every district. In New England it is called the Murphy Seedling, and on the Manera plains, Smith's Seedling. The apple, pear, quince, apricot, persimmon, plum, cherry, and many other fruits do quite as well here as the peach and grape. Passion fruit, a fruit almost unknown in California, is found here in abundance. The cherries of the mountain districts are regarded as among the largest and finest in the world. Peanuts do not appear to thrive well here. I have never seen but one sack in the market during my residence in Australia.

The almond, walnut, and hickory-nut do well, although the two latter are not so common as the former. Melons of all kinds grow to great size, and many of them are quite equal in flavor to those of the Pacific slope of the United States.

Fruit of all kinds, however, is very dear in Sydney, and the condition in which it is brought to market reflects very little credit upon those conducting the trade.

EXPORT OF FRUIT.

Oranges and lemons are the only fruits cultivated for export in New South Wales. During the present year quite an impetus has been given to the export of New South Wales oranges by the establishment of several wealthy fruit companies of Sydney and London.

Sir Henry Holland, secretary of state for the colonies, has addressed a circular letter to the premier of this colony requesting certain information in regard to the development of the orange industry in Australia. The information collected by the premier in response to

the circular, it is said, will shortly be published, and as soon as it is I shall embrace the substance of it in my next report on the fruit trade of this colony. The quantity of fruit exported from New South Wales during 1886 consisted of 332,931 cases, valued at $573,855, against 290,250 cases, valued at $562,505 for the year 1885.

Quantity and value of fruit, principally oranges, exported from New South Wales for each year from 1877 *to* 1886, *inclusive.*

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Cases.			*Cases.*	
1877	194,061	$336,490	1882	214,773	$440,990
1878	174,253	355,945	1883	277,925	586,100
1879	223,920	433,335	1884	245,859	491,695
1880	237,041	451,505	1885	290,250	562,505
1881	309,247	530,925	1886	332,931	597,855

Nearly all this fruit was shipped to the neighboring colonies, the bulk of it going to Victoria and Queensland, the former colony in 1886 receiving 184,636 cases, valued at $280,450, and the latter 90,848 cases, valued at $252,849. The subjoined table shows the quantity and value of fruit exported from New South Wales for 1885 and 1886.

Whither exported.	1885.		1886.	
	Quantity.	Value.	Quantity.	Value.
	Cases.		*Cases.*	
Great Britain	.....	.....	1,472	$3,390
Victoria	149,422	$284,775	184,636	280,450
South Australia	2,286	4,205	241	775
Tasmania	7,796	18,095	10,852	23,995
New Zealand	40,714	78,475	44,044	72,785
Queensland	89,189	268,225	90,848	252,849
South Sea Island	.....	.....	10	35
New Caledonia	498	1,530	507	1,845
Fiji	33	145	180	5,000
Hong-Kong	400	700	.....	.....
San Francisco	275	770	.....	.....
France	50	100	.....	.....
China	80	140	.....	.....

The successful shipments of a few small lots of fruits to the Colonial Exhibition at London last year has led many to believe that an extensive trade in this article can be established between Sydney and Great Britain.

Mr. Alexander Woods, agent-general for Canada to New South Wales, has recently pointed out the fact that Australian oranges occasionally find their way to the Canadian market by way of London, and he is very decided in the opinion that fruit can be profitably exported from Sydney to central Canada and the southwestern portions of the United States by way of the Canadian Pacific Railway. Mr. Woods is unable to give the prices of freights by that route, but says "he has reason to believe that they will be more moderate than by way of San Francisco, and that the Canadian Pacific Company is prepared to run a fast line of steamers (for the consideration of a subsidy of about $450,000 per annum) between Sydney and Vancouver's and carry the Australian mails to London within a period of thirty days."

The various colonial governments have been asked to join in the subsidy, but as yet none of them have consented to do so, and without it the line cannot very well be established; moreover, it is scarcely probable that the Canadian Pacific could offer any more favorable terms as to freight than the other lines crossing the American continent, whilst the advantages afforded to the Australian merchant at a place of departure like San Francisco are infinitely greater than could possibly be enjoyed at Vancouver's.

The shipment of oranges from Sydney direct to London, a distance of about 14,000 miles, is believed to have passed through the experimental stage. Already the Orient Steamship Company have gone to considerable expense in fitting up elaborate freezing chambers in their vessels for the fruit. The *Lusitania*, which sailed from here on the 4th instant, carried with her 1,000 cases of oranges for Mr. Cairns, the manager of the Parramatta branch bank of New South Wales, and I understand that Mr. Cairns is preparing to make further shipments upon a more extensive scale. In the mean time the Orient Company have reduced the price of freight on fruit to London from £4 ($19.46) to £3 10*s.* ($17.03) per cubic ton.

G. W. GRIFFIN,
Consul.

UNITED STATES CONSULATE,
Sydney, New South Wales, June 13, 1887.

QUEENSLAND AND ITS RESOURCES.

REPORT OF CONSULAR AGENT HARRIS.

With the exception of Melbourne, which, after the discovery of the Victorian gold fields in 1851, rose like magic from what was little better than a township into an important city, no town in Australia has made such rapid progress as Brisbane. This, the capital of Queensland, lies in the south of the colony, not far from the New South Wales border, in 27° 28′ 3″ south latitude, and 153° 6′ 15″ east longitude, and is situated on both banks of the Brisbane River, about 25 miles from its mouth in Moreton Bay. The Brisbane is a magnificent highway, along which steamers of over 5,000 tons pass with ease and safety and find berth alongside the city wharves. Yet it is only of late years that the river has been made practicable for vessels of a large class.

SHIPPING FACILITIES.

Up to a comparatively recent date, vessels of over a few hundred tons were compelled to load and unload their cargoes in Moreton Bay, or at best a few miles up the river but by the exercise of judgment and a large expenditure of money the depth has been greatly increased both in the river and on the bar at its mouth. There is also a commodious floating dock in one of the town reaches capable of accommodating the largest vessels frequenting the port. Brisbane has a large and constantly-growing coasting and over-sea trade, carried on by the fleet of steamers belonging to the Australasian United Steam Navigation Company, consisting of over thirty high-class steamers; and by those belonging to Messrs. Howard Smith & Sons,

limited, whose vessels are also numerous. The port is also a calling place for steamers plying between China, the East, and the southern colonies of Australia, and the magnificent steamers of the British India Company keep up frequent communication between Brisbane and London. Besides these and a large number of small crafts—sailing and steam—there are a considerable number of large sailing vessels arriving in the course of the year from American and European ports. New Zealand also sends a contingent of steamers and sailing vessels. Steamers ply at very short intervals, almost daily indeed, between Brisbane and Sydney, Melbourne and Adelaide southward; and northward between Brisbane and all Queensland ports as far as Normanton, in the Gulf of Carpentaria. The capital is in constant communication with the ports serving as outlets to all the chief gold and other mines of the colony, while those too far inland to avail themselves of water carriage are for the most part served by railways to and from Brisbane.

IMPORTS AND EXPORTS.

The imports and exports are large and increasing. The imports for Brisbane reached £3,860,645 ($18,762,735), and for the colony, £6,422,490 ($31,213,301), in 1885. The exports were valued at, for Brisbane, £1,707,596 ($8,298,917), and for the colony, £5,243,404 ($25,482,943). The whole commerce of Queensland employs at the present time 1,500,000 tons of British shipping, a large proportion of which must be credited to Brisbane.

WHARVES AND BRIDGES.

The wharves of the city occupy a considerable area on both sides of the river, but they are hardly sufficient for present needs. The Government has erected a large wharf on the south side, adjoining the station of the South Coast Railway, which communicates by a loop line with the Southern and Western Railway. The wharf is provided with large accommodation for the shipping of coals and the unloading of iron rails and heavy machinery. The Government also own some smaller wharves, while the remainder belong either to the municipality or private firms. The river is spanned by a bridge 1,000 feet long, which connects North with South Brisbane, and which carries, in addition to a large tramway and other vehicular traffic, several water and gas mains, while on either side accommodation is provided for pedestrians. The question of the erection of another bridge in the center of the busiest portion of the river traffic has been mooted, but the difficulties in the way are great; one of them being that the bridge would have to be of sufficient height to allow of large vessels passing beneath it. This difficulty could, of course, be overcome, but it would be at an enormous cost.

BUSINESS ACTIVITY—RAILROADS.

Brisbane is a very busy city, and the places of business—banks, insurance offices, and warehouses—are on a large scale, many of them possessing considerable pretensions to architectural excellence. The railways having their termini in the metropolis are the Southern and Western, which, after passing through the already extensive and rapidly developing coal district lying between Brisbane and

Ipswich, and at the latter place, and Toowoomba, the capital of the far-famed Darling Downs, breaks into two main routes, one going to the New South Wales border, where it joins the railway system of the latter colony, and putting Brisbane into direct communication by rail with Sydney, Melbourne, and Adelaide. Before reaching the border this branch passes through Stanthorpe, the center of a large tin mining district. This portion of the Southern and Western Railway is about 200 miles long. The other portion goes to the west, which it penetrates to a distance of about 400 miles. Both sections have several branches. Other railways terminating in the city are the South Coast and the Brisbane and Sandgate Line. Another line will shortly be commenced to Cleveland, which, like Sandgate, is a watering-place, in Moreton Bay. This bay and the river, like the whole coast of Queensland, are admirably lighted and provided with buoys and beacons, the Government having for years past paid especial attention to this very necessary work. The post and telegraph departments, whose headquarters are in Brisbane, are very efficiently conducted. There is connection by wire with nearly the whole of the towns of the colony, and with the rest of Australasia, while there is cable communication with Europe, America, and the East.

GOVERNMENT.

Brisbane is the seat of government, the legislature consisting of two chambers, the Upper and Lower Houses, the former being composed of members nominated for life and the other being elective. The governor, who is appointed by the Crown, is the head of the executive. The tramway system of the capital is an extensive one, and new routes are constantly being opened.

POPULATION.

The city is well supplied with newspapers, both daily and weekly. At the first census of Queensland, in 1861, three years after its separation from New South Wales, the population of the colony was 30,059, while at the census of 1886 it was 322,853, having nearly doubled in the last ten years. The population of Brisbane in 1886 was over 73,000.

INDUSTRIES.

There are several iron-works and other manufactories in Bisbane, and sugar is cultivated and manufactured on a large scale in the surrounding districts, the industry employing a considerable quantity of machinery. The industries and products are as numerous as they are varied. Of the former, the chief are those connected with gold, silver, tin, copper, and other mining. Sugar growing: The out turn of sugar in 1886 was 59,225 tons of sugar, 1,784,266 gallons of molasses, and 159,122 gallons of rum, manufactured in 159 mills and 9 distilleries. The census of 1886 gave, in the agricultural statistics for 1885–'86, an area of 427,663,360 acres, of which 209,130 acres were under tillage, the crops consisting of cereals, fodder, maize, potatoes, cotton, arrow-root, tobacco, grapes, tropical and semi-tropical fruits, and sugar-cane. The pastoral is the most important industry in Queensland, though some claim this position for the mining industry. The farmers have made heavy losses of late years, owing to long-continued

droughts; but the industry is, owing to the advent of good seasons, speedily recovering from its depression. In 1885-'86 there were in Queensland 260,207 horses, 4,162,652 cattle, 8,994,322 sheep, and 55,843 pigs; a total of 13,473,024 head of stock. Timber getting is another considerable industry.

MINING.

The statistics relating to the great mining industry of Queensland are highly important. The gold got during 1886 showed an increase on 1885 of 30,057 ounces, which was an increase on the previous year of 3,137 ounces. Mining is officially reported as being in a very healthy condition generally, with every indication of steady progress. A great deal of mining capital and machinery are being introduced from Great Britain and Victoria, but much more is needed to fully develop the great mining resources of the colony. The gold fields are situated in three divisions:

The northern, consisting of Charters Towers, the Cape, the Palmer, the Hodgkinson, Mulgrave, Ravenswood, Etheridge, Woolgar, Cloncurry, and Croydon—Charter's Towers being the premier gold field of the colony. It produced in 1886 144,379 ounces out of a total of 195,185 ounces from all the northern fields. In the central division the gold fields are: Clermont, Nebo, and the Rockhampton and Clermont districts. The famous Mount Morgan mine, which is at present yielding gold at the rate of 1,500 ounces a week, with every prospect of a greatly increased return, is situated in the Rockhampton district. Of this mine the gold warden reports as follows: "The production of the mine seems as if it would for many years only be limited by the amount of labor and appliances in use." The following fields are situated in the southern district: Gympie, Kilkivan, Pikedale, Talgai, Teningering, and others of no great importance. The total yield from these fields in 1886 was 88,782 ounces, the much greater portion of which was got at Gympie. The central gold fields yielded in the same year 57,031 ounces, towards which the Rockhampton fields contributed 49,086 ounces.

The gold raised in Queensland since the first discovery of the metal up to 1886, inclusive, was valued at £18,134,266 ($88,132,533). The Croydon field, in the northern division, was only proclaimed in January, 1886, since when a large quantity of stone has been raised, some of it going as much as 66 ounces to the ton. Great results are looked for from this field as soon as it is sufficiently supplied with effective machinery.

During 1886 the following lode and alluvial tin was got: At Herberton, 2,448 tons, valued at £122,920 ($597,391); at Ravenswood and Star, 6 tons, valued at £330 ($1,604); at Stanthorpe, 430 tons, valued at over £20,000 ($97,200); at Cooktown, 121 tons, and at Kangaroo Hills, 148 tons. The silver and lead mines produced: At Herberton, 340 tons. valued at £22,446 ($109,088); at Ravenswood and Star, 1,216 tons, valued at £29,001 ($140,945). The coal raised was: Wide Bay, 39,048 tons, valued at £23,189 ($112,699); at Ipswich, 189,608 tons, valued at £72,054 ($350,182): 900 tons of copper of the value of £7,000 ($34,020) was obtained at Cloncurry. Much mining machinery has been introduced into Queensland from Great Britain and the southern colonies, principally Victoria, and the more recent importations have been of an improved class; but there is still considerable room for improvement in this direction.

MINING MACHINERY.

American mining machinery has not been introduced on the Australian mining fields to any great extent. It is certain that where fine gold has to be saved, or long sluicing trenches and flumes erected to carry water over long distance, the Americans are before the Australians in their appliances and machinery. As regards quartz crushing, it is the opinion in Queensland that Victoria machinery is at least equal to that manufactured in the United States; but as regards silver machinery and treatment, it is the opinion of many intelligent miners that the Americans have the advantage, but, owing probably to ignorance of the best manner of utilizing American appliances, their general use is precluded. "The Pacific Smelter," for instance, which has been so successful in the States in the treatment and reducing of lead and silver (galena) ore, has been thrown aside as useless at Mount Albion mine, near Herberton. Probably what is wanted first are American mineral experts, to see the Queensland ores and to show the miners how to treat them and how to apply American machinery. It is well known to many mine owners in the colony that first-rate machinery is manufactured in the United States for dressing ores, but then there is the doubt as to whether the Queensland ores are of the kind which this machinery is fit for, or whether they require a different treatment. While American "concentrators" are well spoken of, Gympie mill-owners maintain that for the treatment of Memdic ore and tailings the "concentrators" of local invention and make are equal to anything of the sort in the world. There is no doubt a large field for the importation of American mining machinery, but its introduction should be supervised by practical men, who can initiate miners into the method of applying it effectively.

Those engaged in mining pursuits in Queensland require to be educated in the use of machinery which is new to them. The best machinery and appliances in the world may be landed in the colony, but unless they are, in the first instance, accompanied by experts, who can apply them and impart instruction in the application, the importation will be comparatively in vain. Machinery, and especially mining machinery and appliances, will not always speak for themselves, especially in the case of people who have become accustomed to the machinery they already have in use, and who are not inclined to study for themselves what is quite new to them. Of course the success of the introduction of American mining machinery and appliances into Queensland would depend greatly on the price, all other things being equal, but it is probable that in this respect the States would have the advantage over Victoria at any rate. At present the transport of machinery to some of the mines distant from the coast is very costly, but this of course applies equally to all machinery, from whatever part of the world it arrives. At the same time the expense of carriage considerably decreases the consumption, but the difficulty will, by degrees, be overcome as railways become extended. At the present time some of the most important of the Queensland gold fields, such as Charter's Towers and Gympie, are reached direct by railway, and others will be in a very short time.

PORTS OF QUEENSLAND.

A short description of the ports on the Queensland coasts, and especially those which are the entrepots of the gold and other min-

eral fields, will not be out of place in this report. Of Brisbane, which is the first port on the coast starting from New South Wales, sufficient has already been said. Starting from Brisbane and going northward the following are the chief ports in order: Maryborough, a large town of 12,000 inhabitants and having a busy port, is situated on the Mary River, about 25 miles from its mouth. Here are some important founderies and ship-building yards. In the surrounding district there is a large area under sugar-cane. In the neighborhood are the important Burrum coal pits, which are connected with Maryborough by railway. There is also a railway to Gympie and its gold field, which will shortly be connected with the metropolis by rail. Seventy miles further up the coast is Bundsb.rg, on the Burnett River, 10 miles from the sea. Here is a railway to the mining district of Mount Perry. Sugar is largely cultivated in the district, as well as all kinds of other agricultural produce. Population of town and district, 9,890. There is, as at Maryborough, constant communication by steamer with north and south.

Higher up the coast is Gladstone, in the Port Curtis district, but owing to the want of good back country the port is not so flourishing as others on the coast generally. Ninety-one miles distant is Rockhampton, also in the Port Curtis district. It is the second most important place in Queensland. It is situated on the Fitzroy River, 35 miles from its mouth. Large vessels can come up to the wharves, and a very large trade is carried on both in imports and exports. The town is on both sides of the river, and connection is furnished by a fine bridge 1,160 feet long. (Twenty-six miles south-southwest of Rockhampton is the famous Mount Morgan mine.) The Central Railway has its terminus here. It extends towards the west as far as Barcaldine, its length being 358 miles, with branches to Springsure and Clermont. Back of Rockhampton for hundreds of miles there is magnificent pastoral country.

Mackay, further north, 625 miles from Brisbane, is the center of one of the largest sugar districts in the country. It is situated on the south branch of the Pioneer River, which is spanned by a bridge 1,324 feet long. In the neighborhood there are twenty-six sugar mills. Population, 11,082. A railway runs to Mirami, a distance of 23 miles, with a branch to Eton. Bowen is situated on the shores of Port Denison, 725 miles northwest of Brisbane. A large area of pastoral country lies inland, and coal is found within 60 miles. Townsville, one of the most important towns and ports of the colony, is situated partly on Ross Creek and partly on the shore of Cleveland Bay, 870 miles northwest of Brisbane. It is the terminus of the Northern Railway, which is carried inland as far as Torrens Creek, a distance of 179 miles, serving the Charters Towers, Ravenswood, and other great northern gold fields. There are good indications of coal in the neighborhood. There is frequent communication with all Queensland and southern ports by steamer. The district is chiefly pastoral, but sugar, maize, and other produce is cultivated to a considerable extent. Cardwell, in Rockingham Bay, has one of the finest harbors on the coast.

There is much fine grazing country surrounding the port, and sugar-cane is largely cultivated. Cairus, at the mouth of Trinity Inlet, possesses the finest harbor in the colony. It is the chief outlet for the Mulgrave gold fields and the Tineroo and Wild River tin

mines. There is a large area of splendid sugar land in the neighborhood and an abundance of valuable timber. A railway is in course of construction to Herberton. Following the coast line northward, Port Douglas is reached. It lies in Trinity Bay, 40 miles from Cairns. Port Douglas is the outlet for the Hodgkinson gold fields, Herberton, and the cedar country. Cooktown is the last port on the northeast coast. It is situated on the Endeavour River, 1,050 miles north of Brisbane. It was here that the great circumnavigator Captain Cook beached his famous ship, the *Endeavour*. It is the terminus of the railway which will ultimately connect with the Palmer gold field. A considerable number of Chinese are located at Cooktown. Normanton lies on the river Norman, which discharges into the Gulf of Carpentaria. It is 1,382 miles from Brisbane. The district (Burke) contains many large cattle and sheep stations.

CONCLUSION.

In conclusion, it is not too much to say that Queensland, with her immense area and resources, her fertile soil and varied climate, bids fair to become the most flourishing of all the Australian colonies. That this belief is not confined to Queenslanders only is evidenced by the fact that the capitalists of the Old World and of the other Australian colonies are every day investing in Queensland industries in the certain belief that they will reap the benefit of the advancement they are so largely engaged in developing.

GEORGE HARRIS,
Consular Agent.

UNITED STATES CONSULAR AGENCY,
Brisbane 1887.

THE RABBIT PEST IN NEW ZEALAND.*

REPORT BY CONSUL CAMPBELL, OF AUCKLAND.

The rabbit pest is the greatest evil that has afflicted the Australasian colonies, and perhaps no greater evil has ever come upon any country. To eradicate it from New Zealand has been the constant aim of Government and people, and the ways and means devised and put in operation to this end have been numerous and ingenious. A rabbit department has been established in the Government, with a superintendent in charge, local boards have been created, and private enterprises set on foot, all having one common object in view—the extermination of the rabbits.

HOW THE RABBITS CAME.

The sheep-farmers of New Zealand were principally from England and were fond of the ways of the Old Country, and it is said that rabbits were introduced for the chase—a popular amusement of the Old World. But it is of little consequence now as to why or how the rabbits were introduced; it is certain that they came. They were brought from England and Scotland and from Tasmania, and were

*See a report by Consul-General Morgan printed in Consular Reports, No. 72.

turned loose upon the country. There were several kinds—the silver gray, the silver brown, and now and then would be found the black and the white furred, but all belonging to the great rabbit family, and were destined to be seen and felt in New Zealand. When it is considered that rabbits breed from six to twelve times a year, the enormous increase that came from the rabbits first introduced is not surprising. It is certain that nothing could so overrun a country since the locusts of Egypt.

HOW THE RABBITS HAVE DAMAGED NEW ZEALAND.

It is difficult to estimate the great damage done to this young colony by rabbits. They have eaten out the ranges so that the capacity for maintaining sheep has greatly lessened. The sheep have fallen off in number. The loss has been immense, running up into millions. It is much easier to give an estimate of the money expended in destroying the pests. At the Australasian stock conference, held in Sydney in October, 1886, it was shown that the rabbit nuisance was more serious than was usually believed. The carrying capacity of the land had been reduced a third and the weight of the fleeces had decreased from 1 pound to 1½ pounds per fleece in weight. The lambing percentage had decreased from 30 to 40 per cent., while the death rate increased from 3, 4, 5, and 6 to 10, 11, 12, and 13 per cent.

THE COST OF EXTERMINATING THE PESTS.

It is much easier to give an estimate of the money expended in the work of extermination than in ascertaining the damages done. In 1882 what is known as "the rabbit act" became a law. Since then the Government has expended annually $35,000 on the Crown lands (Government land) alone. One of the delegates to the Australasian stock conference mentioned above estimated that $1,256,000 was expended annually by private individuals. During the last eight years there has been expended the sum of $12,000,000, and a very much larger sum from the beginning of the warfare, but how much it is difficult to state.

At the Australasian conference Mr. J. D. Lance, a member of the parliament of New Zealand and a delegate, brought up the rabbit pest, and in the course of his address, said: "That a committee of both houses of the New Zealand parliament considered the question for two months, and legislation followed the action of the committees. A bill was passed, which, while he could not say that it was perfect, was nevertheless a step in the right direction." He said "that fencing was one of the great elements of success, but in New Zealand fencing was difficult on account of a mountainous backbone running through the infested island, parts of which were precipitous and rocky, that they could not get a pack-horse into a very large area, so that poisoned grain could not be carried there. Therefore they could not see that on these mountainous regions it was possible to carry out fencing to any extent. There were spots, however, where it could be done. In the north fencing could be erected, and there it was proposed that it should be done, but in the south fencing would be more difficult, but they hoped to find fairly good country over which to carry fencing, and he thought if they did so they would save that country from being overrun. If a fence were erected and the great wave of rabbits should come against it without any

opposition it would never keep the rabbits back. Therefore they proposed to build huts at certain intervals along the fence at distances varying according to the nature of the country, and they proposed to have two men in each hut to breed the ferrets as largely as they could and turn them out on the country. That the government did not allow the natural enemies of the rabbit to be destroyed by dogs or otherwise. Ferrets would not live without plenty of water, and in one part of the country, owing to a lack of water, they had become nearly exterminated in a few months' time.

"The witnesses examined by the committee were generally in favor of the introduction of stoats and weasels as the most effective remedy for the evil, and the committee recommended that these animals be largely imported. Upon examining into the matter, Mr. Lance found that the witnesses favoring stoats and weasels were largely sheep farmers or in some way connected with pastoral industry. The agricultural farmers, almost to a man, were opposed to the introduction of stoats and weasels, as they thought they would be very destructive to poultry. Cats were most useful in destroying rabbits, and with ferrets, fencing, and poisoning, sufficient power ought to be brought to bear to keep down the rabbits. Poisoning was valuable in keeping down the pest. The most efficacious means of using poison was in phosphorized oats. There was danger of fire from this during the summer months when the grass was dry. There had not been a stone left unturned to find out better means for the destruction of rabbits."

I have here given the substance of the remarks of Mr. Lance so as to give an idea of the great trouble, expense, and annoyance of the rabbit pest. Large numbers of men have been hired from time to time to make war upon the rabbits. These men are called "rabbiters," and it was stated that these "rabbiters" encouraged rabbits in every way, and had been caught killing the stoats and ferrets. The bonus system had been found to be objectionable and expensive. One of the delegates at the conference stated that the public expense was nothing compared with that incurred by private individuals. He calculated that a quarter of a million pounds sterling had been annually expended without reckoning the loss of grass and the falling off in the condition of the sheep.

CONCLUSION.

The remarks of Mr. Lance which I have given are sufficient to show the great evil that has afflicted this colony. It is difficult to exaggerate it. The struggle to eradicate it has been a long, expensive, and trying one. Notwithstanding all that has been done, in some localities the rabbits have continually increased and the damage has continued. Every effort to destroy them and to stop their inroads has been put forth. The warfare has continued against them in the hope of final victory. As the country becomes more populous and the large tracts of land are occupied and cultivated it is confidently believed that the numerous herds of rabbits which now roam over the land will disappear.

JNO. TYLER CAMPBELL,
Consul.

UNITED STATES CONSULATE,
Auckland, October 6, 1887.

INUNDATION OF THE NILE VALLEY.

REPORT OF AGENT AND CONSUL-GENERAL CARDWELL.

At the island of Rhodda, near Cairo, the altitude of the waters of the Nile yesterday stood at 25 pics. In English measure this represents about 55 feet. A rise of 24 pics, as measured at Rhodda, is regarded as a dangerous flood, and so it has been proven in the present instance. In 1886 the height of the waters on the same day of the month was 20 pics 20 kirats (24 kirats make 1 pic), and that was considered a good rise. It gave an ample supply of water for all purposes of irrigation, and there was no damaging inundation. This year the rise is the greatest for forty-five years past, and a vast extent of country has been inundated. In the Delta no serious damage has been experienced. The dikes about the river channels and the canals have been closely watched and repaired, and when breaks have occurred they have been speedily mended.

DAMIETTA AND ROSETTA BRANCHES.

Along the Damietta and Rosetta branches of the Nile there are now employed as watchmen and workers 23,000 men. Besides this great force tens of thousands of men are looking after the canal banks in the same section. The cotton crop of Egypt is almost wholly produced in the Nile Delta, and present indications are that it will not be affected by the flood. Farm operations are progressing vigorously in all the Delta region. The Indian corn crop there is maturing, and lands are being prepared for sowing wheat and clover. The canals are full, and an abundance of water is at hand with which to moisten the fields for the successful use of the plow.

Henceforth the prospect in the Delta is pleasing enough, though it is costing the Government an enormous sum of money to keep watch over and confine the flood of the great river.

EXTENT OF THE DELTA.

The Delta of the Nile begins at Cairo, north of the city. The country widens rapidly as it approaches the sea, forming the great plain known as the Delta. South of Cairo, lying between two great elevated deserts, is the valley of the Nile, extending through Egypt and Abyssinia and the Soudan into unknown regions of Central Africa. Along this far-stretching valley the waters have risen and invaded it at almost every point, and destruction is in their path. Doora (Indian corn) is grown to a very considerable quantity throughout the valley. The crop was maturing when the unusually early flood came and deluged the growing fields. The reports are that this crop is almost totally destroyed, and the meal produced from Indian corn being almost the staff of Egyptian fellaheen life it must follow that great distress will ensue until the next wheat crop matures. But as the seed for this crop will not be planted until the flood wholly subsides, relief in this respect is a long way off.

DAMAGE TO THE SUGAR CROP.

The sugar-cane crop, almost entirely grown in Upper Egypt, has also been largely damaged by the floods.

The crop of dates is said to be very large and superior, but it is being saved under great difficulties, in consequence of the invading waters. Besides, it is reported that many of the trees are so infested with scorpions and other reptiles, which have fled from the waters for safety, that men cannot be induced to climb among them to gather the fruit. Altogether, the losses in crops are great.

HOME SUPPLY CUT OFF.

The supply for home consumption has been almost totally cut off, while that for market has been most damagingly curtailed.

Besides destruction of crops, very many villages and towns have been inundated, and inundation of an Egyptian town, in which mud walls for house construction predominate, means destruction. The houses have fallen in, and whole villages and towns have thus been destroyed, the inhabitants having fled to the dikes and desert edges for safety.

LOSS OF LIFE.

Considerable loss of human and animal life has attended all these conditions. There is at present widespread distress, to be followed by much loss of animal life in consequence of scarcity of food. Relief funds are being raised, but the record in Egypt regarding such funds is that they are absorbed by the officials employed to distribute them.

On the west side of the Nile, opposite Cairo, a good idea of the valley inundation may be obtained. Directly westward to the edge of the desert it is about 7 miles, while to the Guzeh Pyramids, 6 miles away, and farther to the south, on the edge of the same desert, there is a great waste of waters lying over cultivatable fields, hedging in if not altogether inundating villages, leaving nothing but winding, elevated roadways and dikes, skirted by splendid lebbeck trees and a few date palms, to prove that the waters have usurped *terra firma*. I went out on the road to the Pyramids a few evenings since, and beheld this waste of waters. Toward the setting sun, where a few weeks ago I had seen green fields of maize, I contemplated a wholly new scene—the shadows of those huge monuments descending toward a delusive heaven below, the exact counterpart of the real one above.

This inundation is now a great evil, but it will be followed by blessings—richer soils and more abundant crops in future years.

JOHN CARDWELL,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Cairo, Egypt, September 24, 1887.

TRADE OF BARACOA.

REPORT OF COMMERCIAL AGENT HARRISON.

Baracoa is a city containing about 5,000 inhabitants, situated upon a harbor equal to about 2 miles square, or 1,200 acres, land measurement. The average depth of the harbor is 16 feet.

The inhabitants of the town are mostly employed in merchandising. They are natives of Spain and their descendants.

Many of the natives are employed in cigar-making, of which a large number are made annually. Cigar and cigarette smoking is indulged in by most of the people. The tobacco of the island is not adapted to chewing purposes.

The natural drainage of the city is good, as all refuse finds its way to the harbor or the ocean.

The streets are mostly of concrete, and their usual width is about 24 feet. They are very dimly lighted; the side streets are especially dark.

The inhabitants are very courteous and hospitable, and their houses are usually open to strangers.

The dwellings are usually made of concrete and painted blue and yellow.

EXPORTS.

The exportations are exclusively cocoa-nuts and bananas, all of which are exported to the United States.

The city possesses one cocoa-nut oil mill that uses 54,000 cocoa-nuts per month. Forty of the employés are natives. The average wages per day of ten hours is $1. There is also a cocoa-nut soap factory; number of hands employed 10; each received $1 per day. One saw-mill; number of employés, 6; average wages per day, $1. One chocolate factory; number of hands employed, 4; average wages per day, $1. All are run by steam, the cocoa-nut husks, as well as the shells, being utilized as fuel.

COCOA-NUT OIL.

The average number of barrels of cocoa-nut oil shipped per annum is 4,000, all of which is utilized on the island, being shipped to Havana and Santiago de Cuba, and distributed from there to the different parts of the island.

It requires on an average 23 cocoa-nuts to make one gallon of oil. After the oil has been pressed from the cocoa-nut the refuse is fed to horses, cows, pigs; any excess is used as a fertilizer, which is equal to Peruvian guano, which is called cocoa-nut cake. Most if not all of the planters receive advancements upon their crops, which are exclusively cocoa-nuts and bananas.

There are three firms that control the exportation of the cocoa-nuts and bananas.

HOW EXPORTS ARE MADE.

The exportation is made through Norwegian steamers, as they can be chartered cheaper than any other vessels. When the business was in its infancy American vessels and schooners carried the exports, but they were soon displaced by English steamers, and they in turn displaced by Norwegian steamers.

The following is a statement as to the fare of American and Norwegian seamen:

American scale of provisions to be allowed and served out to the crew during the voyage.

	Bread.	Beef.	Pork.	Flour.	Peas.	Tea.	Coffee.	Sugar.	Water.
	Pound.	*Pounds.*	*Pounds.*	*Pound.*	*Pint.*	*Ounce.*	*Ounce.*	*Ounces.*	*Quarts.*
Sunday	1	1½	.....	½	.....	½	½	2	3
Monday	1	.....	1½	.....	½	½	½	2	3
Tuesday	1	1½	.....	½	.....	½	½	2	3
Wednesday	1	.....	1½	.....	½	½	½	2	3
Thursday	1	1½	.....	½	.....	½	½	2	3
Friday	1	.....	1½	.....	½	½	½	2	3
Saturday	1	1½	.....	.....	.....	½	½	2	3

Substitutes: One ounce of coffee or cocoa or chocolate may be substituted for one-quarter ounce of tea; molasses for sugar, the quantity to be one-half more; 1 pound of potatoes or yams; one-half pound of flour or rice; one-third pint of peas, or one-quarter pint of barley may be substituted for each other. When fresh meat is issued the proportion to be 2 pounds per man per day in lieu of salt meat. Flour, rice, and peas, beef, and pork may be substituted for each other; and for potatoes onions may be substituted.

Norwegian crew: Peas, one-half liter per day; rice, one-half liter per day; tea, one-eighth liter per day; barley, 1½ liters per day; coffee, one-half kilogram per day; sugar, 1 kilogram per day; water, 1,000 gallons to trip of fifteen days, used for drinking and cooking for whole crew.

Substitutes: Soup, seven times a week, made of peas or barley; beef seldom; when possessed, vegetable soup is made; salted meats, *e. g.*, pickled beef, one-half kilogram per month; butter, 8 kilograms per week, which is for the entire crew; potatoes (Irish), 150 kilograms per month; pies, twice a week; bread, biscuits, per man, 4 kilograms per week.

Norwegian stock fish is used almost exclusively, being cheaper than beef or pork.

The difference in the wearing apparel of the crews is very perceptible, the Norwegian being poorly clad.

WAGES.

The following are the corresponding wages received by the seamen:

Crew.	Norwegian.	American.
Captain ..... per month..	$62.50	$100.00
First mate ..... do.....	25.00	50.00
Second mate ..... do.....	20.00	35.00
Firemen (3)*	60.00	105.00
Seamen (4)†	60.00	100.00
First steward ..... per month..	20.00	40.00
Second steward ..... do.....	(‡)	10.00
First engineer ..... do.....	40.00	100.00
Second engineer ..... do.....	22.00	60.00
Coal-heavers (2), at $25 each	.....	50.00
Total wages	309.50	650.00
Number of men	14	16

* Norwegian, $20 each; American, $35 each. † Norwegian, $15 each; American, $25 each. ‡ Have none.

There is one line of steamers running between Havana and Baracoa, touching at intermediate points and Santiago de Cuba and the Island of St. Thomas, composed of five vessels. They carry the mails, and touch here four times a month each way.

TELEGRAPH COMMUNICATION.

Telegraph communication is with Santiago de Cuba, which is not at all times in good condition; in that event all cablegrams are brought by the mail steamers.

FRUIT.

The fruit adjacent to Baracoa is brought into the place upon mules and steers; all fruit grown on the plantations bordering upon the sea-

coast is brought by sloops. There are about 12 or 15 sloops used, manned, each, by about 3 men as a rule.

EXPORTS AND IMPORTS.

The following are the exports for the months of May, June, and July, including tonnage of vessels:

Statement showing the exports from Baracoa, Cuba, to the United States for the months of May, June, and July, 1887.

Description.	May.		June.		July.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Cocoa-nuts	708,572	$15,471.55	817,873	$14,446.36	536,190	$9,621.51
Bananas (bunches)	200,426	147,848.20	209,388	140,571.70	178,847	96,499.55
Pine-apples	618	49.44			6,071	485.68
Cigars					5,000	120.00
Cocoa-paste (4 boxes)						15.00
Total		163,369.19		155,018.06		106,741.74

Movement of vessels during the months of May, June, and July, 1887.

	Number.	Tonnage.	
		Foreign.	American.
May:			
Arriving	23	9,229	438.54
Departing	23	9,229	438.54
June:			
Arriving	23	9,544	348.00
Departing	23	9,544	348.00
July:			
Arriving	21	8,319	
Departing	21	8,319	

There are no imports to this place by reason of the fact that Havana and Santiago de Cuba, being the largest cities on the island, possess the wealth and advantages of a large merchant marine shipping at their ports. All merchandise coming here was formerly Spanish, French, and English, but the difference in the quality between their wares and the American has placed the American goods in the market, and they are now fast taking the place of other goods, in fact, everything in the hardware and merchandising line is American.

Should American merchants have their employés taught the Spanish language and send them to the Spanish Possessions, America would soon have the carrying trade which is now possessed by the Spanish, French, and Norwegian vessels.

THEODORE L. HARRISON,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Baracoa, Cuba, August 19, 1887.

INDIGO IN CHINA.

REPORT OF CONSUL JONES.

In a former report to the Department of State I mentioned, among other things, that indigo was one of the productions of this province. It is cultivated to such an extent, and its manufacture into the indigo of commerce is so important an industry, that I have deemed it worthy of some more extended remarks.

The article of commerce is of such universal use, the cultivation of the plant is attended with so little care, and the manufacture of the dye is so simple, that I have thought the farmers of the United States might find it to their advantage to introduce its cultivation, in a small way, among their crops. If not found useful in their household economy, it could at least always be bartered at the country store for something needed on the farm or at the home. From my observation the indigo plant would thrive anywhere in the United States from Maryland to the Gulf of Mexico.

Blue is the favorite color for the clothing of the Chinese, and in this place I would remark that, so far as my knowledge of different people goes, there are none whose costume, whose daily dress, is so sensible, so simple, and of such little cost as that of the Chinese. It is exactly adapted to their wants, comfortable, convenient, suitable for every calling except the sailor and the soldier, and the whole outfit of clothing for a man (I mean the farmer here and the laboring man) costs him not exceeding $5 for the year—scarcely the cost of a pair of shoes in America. China is so conservative that in all its long history and its contact with the other nations of the earth it has never, at home or abroad, changed its national costume, or, for that matter, taken anything, habit or otherwise, from the foreigner.

Cotton is grown all over the southern portion of China, and is manufactured into cloth of coarse quality for the clothing of the people. There is imported also from England a common cotton cloth which serves the same purpose. American cotton goods are very popular with the Chinese; but, for the most part, they are too fine and too expensive for general use. These cotton goods are all dyed with the native indigo before being made into clothing.

MANUFACTURE OF COTTON CLOTH.

The manufacture of the cloth is done mostly in the family, though there are cotton manufactories in the country, and with the old-fashioned loom—so old, indeed, in its fashion that it has never undergone modification or improvement since its invention in the remote past. In a stroll through a Chinese town or a jaunt among the farmers in the country the homely sound of the shuttle constantly greets your ears, and through the open doors may be seen the women-folk busy at the loom.

The indigo plant is cultivated as part of the crop of every farmer in the province, and, upon its manufacture into the dye, is used by the family for the purposes above mentioned; that which is not consumed in this way is put upon the market for sale and exportation.

The manufacture of the article must be very great to afford the dye for the clothing of such vast numbers of people, and to supply the large amount sold in the market and shipped abroad. I regret that there are no data accessible to me of the quantity of indigo thus used and sold.

THE INDIGO PLANT.

The indigo (*indigo fera*) is a leguminous plant, with a stock and leaf not unlike the ordinary fish geranium in size and shape, as near as I can compare it, but of a color much darker green. It is hardy, easily cultivated, of prolific growth, and little subject to disease or the inroads of insects. The ground is prepared by the plow and harrow, thoroughly pulverized, and enriched by liquid manure, the latter in common use by the Chinese in the cultivalion of all their crops—a practice which in the spring-time of the year is very trying to the olfactory nerves of the wanderer by the country-side and does not invite him to linger, however enchanting the other surroundings may be.

As in the cultivation of rice, the seed of the indigo plant are sown in patches of ground and as thickly as possible. In a month, when the plants are several inches high, they are transplanted into a larger piece of ground and in rows about 18 inches apart. From that time until they are gathered they require very little care, with the exception, in a scarcity of rain, of being occasionally watered. When they reach a height of about 2 feet and the leaves have assumed a dark, rich, blue color, they are cut to the ground and gathered for the manufacturing process. From the roots when the plants are cut down another growth springs up and two crops are made in the year. In every farm yard there are a dozen or more large earthen jars or "kongs," as they are called, with the capacity of a whisky barrel, which are used for the manufacture of indigo.

METHOD OF MANUFACTURE.

Those who go into the manufacture more extensively have a large brick-lined tank built in the ground, 6 or 8 feet in depth and of a diameter of 10 or 15 feet, with a capacity of many hundred gallons. The plants are placed in these receptacles and covered with fresh clear water where they are allowed to steep for several days till the *indican*, a peculiar substance contained in the juices of the plant, is decomposed by fermentation. This process is aided by the application of a little slacked lime and frequent stirring, when the indigo is precipitated in the form of a dark blue sediment, which, when dried, forms the indigo of commerce.

The quality of the indigo is characterized by its color; the richer and darker the blue the more it is esteemed and the higher prices it will bring in the market.

During the process of manufacture women with flowers in their hair (a universal custom in China) are not permitted to approach the kongs, as it is a belief that their presence is prejudicial to the quality of the indigo, and for a like reason the kongs are removed to a situation protected from the atmosphere of the fields.

A. C. JONES,
Consul.

UNITED STATES CONSULATE,
Chin Kiang, China, September 20, 1887.

TELEGRAPHIC SYSTEM OF CHINA.

REPORT OF MINISTER DENBY.

The representatives of the Great Northern Telegraph Company, of Copenhagen, and the Eastern Extension Australasia and China Telegraph Company (limited) are here seeking the ratification by the Imperial Government of an agreement lately made with the Imperial Chinese telegraph administration.

These two foreign companies have divided the territory in China. The Great Northern has stations at Shanghai, Foochow, Amoy, and Hong-Kong. The Eastern Extension also has a station at Hong-Kong. Neither company does any business with the interior. The lines of the Great Northern are exclusively cable, of which it has about 2,000 miles. Its cable runs from Shanghai down the coast and to Japan and thence to Vladivostock. The Eastern Extension lines go to Europe, through British India.

Telegraphing to and from the interior is done over the Chinese lines, part of which is owned by the Government and part by stock companies. China has at present no connection with any foreign line. Under the existing arrangement the Chinese telegraph administration receives 50 cents per word for each word sent abroad from the interior; under the new arrangement it would receive 70 cents. The two companies charge cable rates, although most of the service is by land.

The Chefoo Convention, as the late agreement is called, sets forth that the Chinese telegraph administration intends to connect its system with the telegraph lines of adjacent countries; that the two companies have such connection, and it is desirable "to avoid competition." It is, therefore, agreed that all the traffic exchanged between any part of China (excepting the three ports, Shanghai, Foochow, and Amoy), on the one side, and Europe (Russia excepted) and countries beyond Europe, on the other side, and *vice versa*, transmitted by the land lines of the Chinese administration, whether via the land frontiers or via the cables of the two companies, shall belong to the administration.

For the traffic above named the administration shall fix a terminal rate of 5 francs and 50 centimes a word, which shall belong to it. The like rate shall be fixed for all traffic exchanged by the land lines of the administration via the land frontier between Hong-Kong, Amoy, Foochow, and Shanghai, on the one side, and Europe (Russia excepted) and countries beyond Europe, on the other side, which shall belong to the two companies, subject to the payment of 10 per cent. of the receipts of the companies, as hereinafter specified.

The companies shall fix their proportion of the tariff on traffic exchanged between Hong-Kong, Amoy, Foochow, and Shanghai, on the one side, and Europe and countries beyond Europe, on the other, and *vice versa*, by their direct cable routes via Russia (Siberia) and via India, at 5 francs 50 centimes per word, which shall belong to the companies, subject to the above-mentioned 10 per cent. payment.

The proceeds of all traffic exchanged, whether by the cables of the companies or by the land lines of the administration, between Hong-Kong, Amoy, Foochow, and Shanghai, on the one side, and Europe

(Russia excepted) and countries beyond, and *vice versa*, shall belong to the companies, who shall pay to the administration 10 per cent. of their proportion of this traffic. When the land lines are interrupted not exceeding sixty days the traffic may go over the cables without change. I do not give minor details.

The administration shall fix the charge of 5 francs 50 centimes for all traffic out of China. Government telegrams shall pay full rates, and no percentage shall be allowed thereon.

The tariffs and payments fixed by the agreement shall not be changed unless by mutual consent.

The parties shall do all in their power to prevent transmission at cheaper rates than the through rates, by any person or corporation, and neither party shall be interested in any other company, by sea or land, to the detriment of either party.

The cables shall not be extended to any place in China or Corea without the consent of the administration, but existing land rights shall be preserved.

The agreement is to take effect from the day that the administration shall connect their lines with the telegraph lines of any adjacent country in telegraphic communication with Europe, and shall be in force until 19th May, 1903.

The substance of this agreement is that China will receive about $150,000 per annum more than she now gets. The main advantage to the two companies is that during sixteen years there will be no serious competition.

There is no principle of monopoly in this agreement as there was in the agreement of 1881, which was vigorously denounced. Any person or corporation, so far as this agreement shows, may lay cables to China from any part of the world. But the two companies are rich, and consider that, by cutting rates, they can kill foreign competition.

The rates fixed in the agreement contain a slight concession to the general public, there being a reduction of 50 cents per word. But the foreigners are not satisfied with this reduction and demand that the price be fixed at $1. The managers take the ground that no man telegraphs except when compelled to, and that business would not be increased if the rate were reduced to $1.

CHARLES DENBY.

LEGATION OF THE UNITED STATES,
Peking, October 6, 1887.

COREAN TRADE.

REPORT OF MINISTER DENBY.

I inclose herewith an article published in a recent issue of a Shanghai paper on Corean trade. While I do not entertain too sanguine views as to the future of Corean trade, still it would be unjust to accept the views of the writer without calling attention to some omissions on his part.

For at least five centuries past the Corean Government has carried on an important trade with China by the overland route by way of Wi-pe and Shan-hai-kuan by means of its so-called tribute-bearing missions to the court of Peking. The most valuable export is of

course ginseng. Of this staple over 33,748 pounds were exported from Newchwang (the Chinese port nearest Wi-pu) in 1886, the total value of which was 194,543 taels. It is possible that the amount of Corean ginseng brought to Peking may reach about an equal sum.

Corean timber is also much used in Northern China, but I am unable to ascertain even approximately its value.

The above remarks will suffice, however, to prove that no just idea can be had of the value of Korea's export trade without giving a prominent place to its overland trade with China.

CHARLES DENBY.

LEGATION OF THE UNITED STATES,
Peking, September 8, 1887.

[From the North China Daily News, Shanghai, August 29, 1887.]

It is difficult to predict with any certainty how soon Corea will justify the hopes of those who take a sanguine view of her prospects; but the returns of her trade for the second quarter of this year, annexed to the last issue of the Customs Gazette, do not show that her commerce is improving either rapidly or widely. That unfortunate little country, as has been often pointed out, is in a very perilous position. She is hemmed in by three much more powerful neighbors, with Russia pressing on her from the north, Japan from the east, and China from the west, uncertain whether to call herself independent or not; her capital and court torn by intrigues so violent that only a few days ago one of her most prominent nobles, after an almost marvelous escape from assassination, himself a near relation of the King, had to fly the country in a Russian gun-boat; her King a weak tool of contending factions, with foreign advisers whose views, though no doubt all honest, must be often contradictory, and encouraged to show his desire for enlightenment by spending on costly and useless toys money which is not now in the treasury and is not likely to come in in any reasonable time. She requires that China should pursue a firm and consistent policy towards her; a policy which should be directed more towards the promotion of her commerce than towards questions of international relations.

Corea's trade is still very small. It is true that the comparative statistics before us are favorable at the first view. The total dues and duties collected at her three open ports in the second quarter of 1887 and 1886 are as under:

	1887.	1886.
Jenchuan	$28,899	$14,599
Fusan	10,877	3,993
Yuensan	12,577	2,539
Total	47,353	21,131

True enough, they have doubled in a year, and that is a favorable sign; but, after all, what a meager amount the total is—it is barely £8,000 sterling, and it seems hardly worth while to keep up a staff at three ports, and headquarters at the capital, to collect such a revenue. There are only two ports in China—Ichang and Wênchow—which have not a larger foreign customs revenue than the whole Kingdom of Corea. If we analyze the returns, the result is still more disheartening. In the products of a country lie its riches. France emerges bravely from the wave of the German indemnity, and floats successfully through a budget that would overwhelm any other nation, because she is unequaled in Europe in production. What do the export duties collected in Corea amount to?

	1887.	1886.
Jenchuan	$2,523	$3,093
Fusan	4,340	1,597
Yuensan	1,098	883
Total	7,961	5,573

That is to say, Corea's total export duties for the quarter, and they are not fixed on a 5 per cent. scale as in China, amount to about £1,300 sterling. And if we examine into the constitution of the table of exports, what do we find? From Jenchuan, the port of the capital, 19,000 piculs of beans and 1,900 piculs of hides; from Fusan, 28,000 piculs of beans, 32,000 pieces of cotton piece-goods, 1,300 piculs of hides, 23,000 piculs of rice, and 3,000 piculs of sea-weed; and from Yuensan, 8,000 piculs of beans, 7,000 eggs, 8,000 piculs of dried fish, 6,000 pieces of grass cloth, 800 piculs of hides, and 3,000 dog-skins.

It is really a melancholy display, and we almost wonder that the chief commissioner of customs does not content himself with an annual return, and thus dissemble to some extent the nakedness of the land. Meritorious endeavors have been made to increase the sum of exportable commodities. Tea seed was imported from China and planted, but Corea has no tea to export. Mulberry trees were got from China and planted, and an endeavor made to encourage the culture of the silk-worm, with the result that Fusan actually exports 3½ piculs of raw silk in three months. The import trade is not much better, as we might expect, for a nation can not go on for long buying imports unless it has a supply of exports with which to pay for them.

At all three ports there is a good demand for lawns and muslins, amounting to 526,000 yards in Jenchuan, for the acting commissioner at that port makes the best of his imports table by using yards as the classifier of his textiles, 38,000 pieces at Fusan, and 29,000 pieces at Yuensan. Gray shirtings stand out with 1,404,000 yards at Jenchuan, 8,000 pieces at Fusan, and 31,000 pieces at Yuensan; but beyond these two staples the import trade with foreigners is little better than peddling. We may take as an instance kerosene oil, whose utility has been so much appreciated in China, and whose consumption is spreading so fast. The importation of this into the whole of Corea for three months is only 3,775 cases.

If we turn to metals the result is equally discouraging. The imports into the whole country for the quarter were, of iron 685 piculs, of copper 826 piculs, of tin and tin-plates 215 piculs, and of miscellaneous metals 79 piculs. It is unnecessary to go into further details; when the next reports from the commissioners are published they may be able to put a more favorable face on the progress of Corea, but so far its condition induces nothing but disappointment. With the exports that we have chronicled, it would of course be impossible for Corea to pay even for the small imports that she does buy, but she has a resource in reserve in her gold washings. The supply of gold has already reached a respectable amount for Corea, the figures for the quarter, after deducting imports, being—

Jenchuan	$200,000
Fusan	52,000
Yuensan	144,000
Total	396,000

And if we may consider that the amount passed through the custom-house is only one-third of the amount actually sent out of the country, this would give Corea an income from gold alone of nearly $5,000,000 a year; but whether this estimate is excessive or not is problematical.

AGRICULTURAL COMMISSION IN THE NETHERLANDS.

REPORT OF CONSUL ECKSTEIN.

By a royal resolution dated September 18, 1886, a Government or state commission was created for the purpose, as stated in said resolution, of examining into the condition of agriculture in this country, and further, for the object of making propositions regarding the means which might or should be adopted by the Government for the promotion of the development of agriculture in the Netherlands, as well as for the purpose of giving advice to the Government as often as it might be asked.

Upon this commission were appointed a very large number of most suitable persons, residing at various places and in the different sections of the country.

Soon after being appointed, the commission organized and began its labors.

Since then the commission has made a number of reports to the Government, or to the minister of water-works, commerce, and industry; some of which have been published and others, for reasons best known to the Government, have been withheld from publication. Among those withheld from publication was a report recently made upon and relating to the restrictive measures in force and concerning the importation of cattle into neighboring countries, setting forth what are, in the commission's opinion, the steps necessary to be taken by the Government of the Netherlands in this important matter.

The reports in question are upon the following-described subjects, or headed as follows, viz:

(1) The commission, after deliberation, deems it desirable that legal measures be adopted to combat irregularities (knoeierijen) in the butter trade, and has, therefore, investigated of what nature the measures must be, in order to accomplish the object.

The commission is of opinion that this matter involves a great national interest, which urgently demands necessary action, etc.

(2) The commission reports regarding a Government subsidy to be given to a dairy school, to be established upon the initiative of the Agricultural Society of Friesland, and in relation to assistance asked in establishing a school for forest culture.

(3) In this report the commission expresses the opinion and endeavors to demonstrate that it would be of great importance if agricultural institutions would be established by the Government for experimenting and investigating purposes.

D. ECKSTEIN,
Consul.

UNITED STATES CONSULATE,
Amsterdam, October 27, 1887.

THE MEXICAN INTERNATIONAL PACIFIC AND GULF OF CALIFORNIA STEAMSHIP COMPANY.

REPORT OF CONSUL WILLARD.

On the 31st ultimo the American steamer *City of Topeka* arrived at this port, and departed on the 1st instant.

This vessel is the first of the new steamship line (called the Mexican International Pacific and Gulf of California Steamship Company) *touching* at this port. This company is incorporated in the United States under a contract with the Mexican Government for twenty years, made by Luis Huller & Co. in 1886. The ships are to run monthly or semi-monthly three steamers of 800 tons register from San Diego, in the United States, to San José de Gautemala, touching at all the intermediate ports (22) of the Pacific coast of Mexico.

The before-mentioned *City of Topeka* left San Diego on the 22d ultimo, on the initial voyage, chartered for this purpose, and arrived here en route to San José de Guatemala and all intermediate ports as mentioned.

This company is Mexican in all suits pertaining to the contract with the Mexican Government. The company has the privilege of using steamers sailing under any flag not at war with Mexico.

SUBSIDY RECEIVED.

The company to receive a subsidy of $8,000 per round voyage for the first five years, $6,000 for the following five years, and $4,000 for the remaining ten years; also $60 per head for each colonist brought for Mexico on the company steamer for the first five years, $50 for each colonist so brought for the following five years, and $40 for the remaining ten years.

The said subsidies to be paid by the Mexican Government from the import and export duties collected from goods imported and exported from and to foreign countries by the company's steamers.

EXEMPTIONS.

The steamers to enjoy an exemption from all tonnage and port dues of Mexico during the continuation of the contract.

MAILS AND GOVERNMENT RATES.

The mails to be carried free. All Government officials (military and civil), troops and employés, munitions of war, and Government freight to be carried at half the rates established by the company.

Should the traffic of the coast be sufficient to maintian this line of steamers (and it is to be hoped that it may be), it will give quick and regular communication with all of the Mexican ports of the Pacific, and greatly aid in the development of the resources of the coast now dormant, to the great benefit of Mexico, and in a corresponding degree to the United States.

A. WILLARD,
Consul.

UNITED STATES CONSULATE,
Guaymas, September 7, 1887.

SUGAR INDUSTRY OF GUERRERO.

REPORT BY CONSUL WINSLOW

SUGAR DISTRICTS.

The amount of sugar produced here, on the bottoms along the banks of the river Salado, which empties into the Rio Grande, 6 miles distant, is very little. Probably the crop this year did not amount to over 30 cargas of 300 pounds each. In the surrounding country, away from the river, no sugar can be raised, as the land is too dry and there is no water to irrigate with. Even on the river bottoms the prospect of making a crop is doubtful, as when the river rises it sweeps away the crop, as was the case this year.

In Paras, Cerralvo, Agualeguas, Puntiagudo, and Sabinas, in the State of Nuevo Leon, towns all situated within 90 miles of Guerrero, and along the bottoms of the Rio Grande as far as Matamoras, there is considerable sugar produced, but the true sugar country is situ-

ated at the towns lying along the foot of the northern declivity of the Sierra Madre, namely, Victoria, Linares, Montemorelos, Cadareita, and numerous other towns, extending as far as the Gulf of Mexico on the south and to the north as far as the borders of the State of Coahuila, in Salinas, Lampasas, Villadama, San Buenaventura, Santa Rosa, and San Fernando. From the cañons in the Sierra issue numerous streams, which unite to form rivers, and at the heads of these rivers, where the banks are low and irrigation can be used, are situated the haciendas of sugar-cane and corn.

DIVISIONS OR MEASURES OF WATER.

The inhabitants of a town and owners of land who so desire form a company and request permission from the General Government to draw off water from the river. This being granted, the river is dammed up and a large canal is made, which is called el saco de agua (sack of water), and leading off from this smaller canals (sequias) are made which conduct the water to the different haciendas. The saco of water is divided up into many shares, and each person takes as many shares as his means will permit him to do, or each one puts so many men to work to make the dam and the canals, and according to the labor he employs is his share in the saco of water.

The saco of water may be of any size or may contain any number of bueys.

Description.	Diameter in inches.	Superficies in cubic inches.
The buey has 48 surcos	48.50	1,296
The surco has 3 naranjas	5.66	27
The naranja has 8 reales	3.38	9
The real has 2 dedos	1.30	1¼
The dedo has 9 pajas	0.65	0¼
The paja has	0.25	0$\frac{1}{16}$

The paja produces every minute 1 cuartello, or 1 pound of water, or 14½ quintals, or 1,400 pounds, each day of twenty-four hours. Besides the above measures there are the following divisions, which signify the time each person has a right to use the water exclusively:

The dia (day) de agua, which is twenty-four hours or from sunset or sunrise of one day to sunset or sunrise of the next, once every month. Thus, for example, a man of moderate means may own but one or two days of water, or even but one hour or so many minutes.

The richer hacienderos (farmers) may own several days of water, or one haciendero may be the exclusive owner of one saco of water. It must be understood that when a person owns one day or more of water he has the exclusive right to the whole water for the time belonging to him, the sluice-gates being shut down in the mean time from the other canals. From the same river there may be several sacos of water, but the number is limited to the size of the river.

The custom is to water the fields every fifteen days. Thus the owner of one day of water would have half a day every fifteen days. These divisions of water are the cause of numerous disputes and lawsuits. Each person is allowed to buy the number of days of water he desires or to sell what he owns.

During the dry season the river may contain very little water, and those who own haciendas near the sources have an advantage over

those farther down the stream. Often a haciendero has not water sufficient to water half of the crop he has planted.

When there is a freshet the saco of water and the canals are often destroyed and the owners are put to considerable expense to repair them. The great obstacle in all these haciendas that have to be irrigated is the want of water and not of land. The cultivation of sugar-cane is therefore monopolized by a few wealthy men who own the land and the water, whilst five-sixths of the inhabitants are compelled to serve the hacienderos or to live on the hacienda as tenants and pay for the use of the water and the land. Perhaps this want of water could be supplied by artesian wells.

LABOR EMPLOYED.

The laborers on the haciendas are called peons. They are literally worse than slaves. These, on receiving a certain sum of money from the owner of the hacienda, oblige themselves to retrieve it by their work, which they seldom do, as their wages are not sufficient for their maintenance, and they are continually asking for money or effects, which are put on their paper of accounts (*papel de cuentas*). Their wages are generally $4 or $5 a month and 1 peck of corn and some beans every week. The tortilla, with red pepper and beans, and perhaps an occasional piece of meat and some coffee, are the sole subsistence for themselves and families. Their bed is a sheep-skin and a cheap Mexican blanket (*frazada*). They are generally an uneducated, quiet, obedient, cowardly set, and, as they have been brought up from childhood as peons, they are generally contented with their lot. The amount of work demanded from a peon is divided into tarēas (tasks). Besides the major-domo or overseer, who sees that the peon attends to his work, there is an administrador, or administrator, who keeps the accounts. The major-domo each morning allots each peon so many rows of corn or sugar-cane to hoe or irrigate, and after the peon has finished his task he is at liberty for the rest of the day. Very often the peons have small plots of land which they are allowed to plant for themselves. There is another class of workmen called arrimados, or part of a congregation who, although they may not owe money, live on the rancho or hacienda with their families, and are allowed to plant or to raise stock on condition that they assist in the labors of the hacienda, when needed, or give a portion of their crop. The medieros are those who plant a field and give half the product to the owner. These two latter classes are much superior to the peons. If it were not for the peons, however, no sugar-cane could be raised, as day laborers are scarce and not to be depended on.

LOCAL CHARGES ON PLANTATIONS.

Each almud or peck of land pays 30 cents to the city government. An almud of land for planting is 100 paces square. This refers only to the land belonging to the town, and is 6 miles square around the town and is called the ejido, or common, and is free to all the inhabitants of the town for pasturage or planting. Any person desiring a field for planting, or a building lot, requests permission from the city authorities, and by paying a small sum for the privilege, and for measuring, he is required to inclose it and it becomes his property.

PREPARATION.

Wooden mills of a rude sort are generally used, although in the larger haciendas iron mills are coming into use, and these are brought from the United States. The only objection to these mills is that they are too costly for persons of moderate means. These iron mills are worked by water-power from the same canals that water the haciendas.

The cane juice is transferred from the tub to large iron boilers, which are placed over a fire in holes dug in the ground, and is boiled, being constantly stirred until it is sufficiently condensed, and is then poured into conical earthen molds, which can contain a pound each. These sugar-loaves, or piloncillos, as they are called, are then wrapped in cane leaves and are tied with fibers from the leaves of the bayonet palm. One hundred and fifty of these loaves are packed in an oblong sack, made of ystle, and constitute 1 tercio of dulce; 2 tercios, or 300 pounds, is a carga. The ordinary price of the piloncillo at the haciendas is $7 to $8 a carga, or a little less than 3 cents a pound; but here in Guerrero it sells at 5 piloncillos for 25 cents when cheap, but generally at 6 cents a pound. The sugar from the different haciendas is not of a uniform quality, some of it being of a yellowish-white color and resembling maple sugar in taste, and some of a dark brown, of a disagreeable taste. This I suppose depends on the manner of boiling the juice. No clarifying materials are used in the preparation of the piloncillo. There are a few sugar refineries in the neighboring state of Neuvo Leon, where this piloncillo is transformed into yellowish-white crystallized sugar-cones of 25 pounds, or an arroba, each, which sells at retail for 25 cents to 12½ cents a pound, or $2.50 an arroba at wholesale. From the scarcity of refineries in Mexico it would be a profitable enterprise to establish them here.

If the reciprocity treaty goes into force it will advance greatly the production of sugar here and create a demand for mills, boilers, and sugar machinery of all sorts; but at present Mexico does not produce enough sugar for her own use, and imports a large quantity of refined sugar from the United States, which is worth here at present 12½ cents a pound, and is generally used by the better classes.

COST OF PRODUCTION.

According to a correspondent at Oaxaca to the Mexican Economist, there are great quantities of land in Mexico suitable for the cultivation of sugar-cane without the need of irrigation. In this class of lands the Indians of Oaxaca produce sugar at 1 cent a pound; Mexico can produce sugar at less than that and at a lower price than any other nation in the world. In Cuba the pound of sugar costs the planter nearly 3 cents. In Central America 2½ cents. In the Sandwich Islands 3 to 3½ cents. In the fertile lands of Mexico that are tempered by the sea breeze and do not need irrigation, the production of sugar does not cost more than 1 cent a pound maximum.

The cause of the state of backwardness in which the sugar industry is found in Mexico is that the actual plantations are not made to produce sugar cheap, but to fill, as far as possible, the consumption of the country at high prices. The actual plantations are made in the dry grounds of the central table-land of Mexico, which do not unite the conditions which are required to produce sugar whose cost of production may not be more than 1 cent a pound.

In the dry grounds of the central table-lands of Mexico, or of the coasts, the cost of production is very high. In these lands the cultivation of the sugar-cane costs much and produces very little; but in the lands which do not need irrigation and unite the necessary conditions the cultivation costs almost nothing and yields enormous profits. In the dry lands the cultivation requires much attention and labor. After preparing the land and planting the canes it is necessary to irrigate it every fifteen days. It also requires several cleanings and drawings up of the earth around the plants. The best lands for sugar-cane are found at 1,500 to 3,500 feet above the level of the sea. They are covered with thick forests and exposed to the breezes of the ocean. They are sloping, to carry off the excess of water on the land, and the air contains sufficient moisture. These lands cost very little for the production of sugar. The forest is cut down and set on fire, and the land is ready for planting without the need of any plow. Corn is planted at the same time with the planting of the sugar-cane, and the crop of corn is sufficient to pay all expenses, there remaining gratis, or nearly so, a plantation of sugar-cane that by only weeding produces crops for several years.

SUGAR-CANE.

There are two kinds of sugar-cane planted here. One called the caña criolla (creole cane), which is about half an inch thick, of a light green color, thin bark, short joints, and very sweet. The other called caña pinta (painted), of a reddish color, 1 inch in diameter, thick, tough bark, and longer joints. The latter is mostly planted, as it yields more juice than the former. The caña criolla produces a much whiter and harder sugar, and of a better quality than the other, and when stripped of its bark and ground, a very white sugar is made, which is somtimes mixed with anise-seed and kernels of walnuts. This class of cane is extensively eaten as a delicacy.

DUTIES.

There are no export duties.

Sugar, common or refined, of all classes, 15 cents each kilogram, import duty.

CHARLES WINSLOW,
Vice-Consul.

UNITED STATES CONSULATE,
Guerrero, Mexico, November 4, 1887.

SUGAR TRADE OF SAN JUAN DEL NORTE.

REPORT OF CONSUL BROWN.

PRODUCTION.

Sugar is not produced in this consular district. The cane is successfully grown in many parts of the district, but the only use made thereof is to eat it in its natural state, boil it down to a sirup, and occasionally convert it into *aguardiente*, by a rude process of distillation. This *aguardiente* constitutes a popular drink among the people.

LOCAL TAXES.

There are no local taxes or charges imposed upon plantations of any kind in this district, nor are there any plantations on which special attention is given to the cultivation of the sugar-cane.

DUTIES.

There is no export duty on sugar in Nicaragua. I do not think there are any exports of sugar of Nicaraguan production, that raised in the interior being consumed in the country.

No import duty, as such, is imposed on sugar imported through the port of San Juan del Norte for consumption within the port limits. On sugars imported through this port for consumption in the country, outside the port limits, and which must pass through the custom-house at Castillo, 80 miles west of this place, and within this consular district, a duty of 5 cents per pound is imposed.

The duty on sugars imported into the Mosquito Reservation is 7 per cent. on the invoice cost, sugar falling within the classification of imported merchandise upon which no specific duty is imposed by the authorities of the reservation.

While, as before stated, sugar imported through this port, for consumption within the port limits, is not subjected to an import duty, still the existing mode of collecting the "commercial tax," as it is called, has, in the opinion of many, the same effect as an import tax, for the consumer of all articles of merchandise, imported into this "free port" has to pay to the importer from 10 to 17 per cent., computed on the first cost of such merchandise, to reimburse the latter for his share-contribution towards the payment of the "commercial tax," required by the Government of Nicaragua for the administration of the city and the maintenance of the "free port of San Juan del Norte."

The amount of the commercial tax levied by the Government when first put in operation was $20,000 per annum, but for the last few years the amount called for has been $12,000 per annum.

By an arrangement made between the gobernador and the citizens this tax is assessed and paid in two installments—on the 1st of May and 1st of November in each year. This tax is collected as follows: Small dealers, groceries, provisions, etc., pay $1 per year; liquor shops, canteens, etc., pay $20 per year; proprietors of small stores of assorted goods, valued at $1,000, pay $10 per year; commission merchants pay 5 per cent. on the amount of commissions realized during the six months immediately preceding the levy.

The amount provided for by these levies makes but a small portion of the tax, perhaps not more than one-fifth. The balance is levied upon the importers, proportionately to the amount of their imports, the invoices being laid before the *Junta de la contribucion*, commercial assessing committee, by the gobernador for that purpose. This committee is usually made up of two merchants, who are designated by the residents and appointed by the gobernador.

There is also a committee of grievances appointed by the gobernador to act upon complaints as to the decisions of the assessing committee.

As there are now only four importers at this port, of whom only two import extensively, it may be said that the weight of the "commercial contribution" falls upon these two. In reality, however,

this tax upon the importers is paid by their customers, and, finally, by the consumers.

TRADE.

The amount of sugar imported annually into this district for consumption therein is estimated at 300,000 pounds, valued at $28,000, American. The most of this, particularly the high-grade sugars, is imported from the United States. A small portion of brown is brought from Jamaica and British Guiana. About two-thirds of the whole is imported through the port of Bluefields, the remainder through this port.

The large quantities of sugar imported through this port (San Juan del Norte) for consumption in the interior, is not included in this estimate.

WM. A. BROWN,
Consul.

UNITED STATES CONSULATE,
San Juan del Norte, October 1, 1887.

NOTES.

American Trade with Japan.—In transmitting inclosed newspaper clipping, Minister Hubbard says:

While the present status of our trade with Japan is in the main correctly stated in the inclosed clipping, and the criticisms of the questionable methods adopted by other than American merchants or the agents of other governments to obtain and monopolize that trade are just, yet it is due to truth and candor to say that the writer of the article misleads, unintentionally, no doubt, as to matters of fact, when saying, of our volume of trade with these countries, that "we are immeasurably distanced alike by Germany and Great Britain, both of which countries look upon China and Japan as among the most important fields for the development of their vast foreign commerce."

The statistics of the customs annual return for 1886 show, to use round numbers, that the aggregate export and import trade between the United States and Japan was over twenty-three millions of yen as against twenty-one millions between Great Britain and her colonies and Japan, and three millions between Germany and Japan*—facts which I had the honor, in a former dispatch, to present fully by figures and tables in connection with a review of the annual trade of Japan with all countries for 1886." It is true, Great Britain's exports to Japan are largely in excess of our exports to this country; but the gratifying fact was made manifest in the trade returns for 1886 that the American export trade had increased during that year over 1885 nearly a million dollars in value. As to Germany, the entire sum total of her exports and imports is less than four millions, nearly twenty millions less than that of the United States with Japan. As to the other obstacles and disadvantages to our more enlarged commercial progress in this country mentioned by the writer of the article inclosed, they are stated with force and fact, and deserve to be earnestly studied and heeded by our countrymen who propose extending our trade in the East with steady steps against all competition.

[From the Australian and South American, August, 1887.]

OUR TRADE WITH CHINA AND JAPAN.

The past few years have witnessed a very material increase in our trade with China and Japan, and present indications would appear to promise that within a reasonable time our commerce with both countries may attain something near the value it ought to possess. The most important feature of the increased trade returns, however, is to be found in the character of our exports to these markets, their variety having been extended in a manner that is particularly gratifying, as affording the best proof of the growing extent to which the people of China and Japan are becoming familiar with our productions.

After all, however, when we come to compare the volume of our business with the value of the trade other nations enjoy with China and Japan we have but little cause for satisfaction. We are unmeasurably distanced alike by Germany and Great Britain, both of which countries look upon China and Japan as among the most important fields for the development of their vast foreign commerce. There are two principal causes for the backward state of our trade with China and Japan, and we may profitably devote a little space to their consideration.

In the first place, we find the same obstacle to our commercial progress in these countries that we have so often called attention to in speaking of our trade with other markets, viz, far too little attention is bestowed on the introduction of our goods, which are almost expected to sell themselves. In nearly any part of the

* See Consular Reports, No. 84, p. 597.

world, except in China and Japan, we might look for business growing out of the opportunities offered buyers by means of trade literature, advertising, etc.; there is little to be done in either of the above countries through such factors. Chinese and Japanese merchants are notoriously keen buyers; they not only want to know the lowest prices and discounts obtainable on any line of goods, the best terms of credit, etc., obtainable, but in nine cases out of ten they want to satisfy themselves, by personal inspection, of the character of the articles they are purchasing. This is only natural. Their customers, for the most part, cherish deep-rooted preferences for certain forms, patterns, and styles in goods of their own or foreign manufacture, and they will not tolerate any deviation from the often arbitrary standard they have established. It is only the native buyer who thoroughly understands what is needed for the market he supplies, and his orders, as received by the resident representative of the foreign manufacturer or merchant, must be minutely observed. Comparatively few American houses have taken the trouble to establish direct commercial relations with China or Japan through firms located in these countries, and the consequence is that their facilities for meeting the requirements of the market are inadequately realized, even by those who would willingly patronize American productions. England, Germany, and France are represented at the principal ports of entry by numerous mercantile houses, and secure in consequence the bulk of a profitable and rapidly increasing trade.

The second disadvantage under which we labor in the development of our trade with both China and Japan is the lack of active support our merchants receive from the agents of our Government in these countries. England and Germany have made it their business to adopt every possible means to secure the personal favor and good-will of Chinese and Japanese officials, and their rivalry in this direction leads them to discredit the efforts of other nations to obtain a footing in these markets. Agents of these Governments resort to every practice in their power, honest and otherwise, to decry competing influences and competition, even to the extent of belittling the business methods and progressive tendencies of the Chinese and Japanese merchants, and the various journals they control render them valuable assistance in this course.

The effect of their action on the foreign commercial and diplomatic relations of both countries is in a high degree detrimental to their advancement. and is plainly proven by the extraordinary favors shown to this or the other nation, according to the influence its representatives are able to exercise in official circles. As an instance we may refer to the large orders the Japanese Government has recently placed for steel rails in Europe. Half the contract has gone to English firms at £4 11*s.*, the other half has been taken by Germans, not at £4 11*s.*, but at £5 6*s.* The rails are to be delivered free on board, in London and Antwerp respectively. The difference of 15*s.* per ton represents in this case, says a writer in Iron, a free gift of about £10,000 presented by the Japanse Government to the German manufacturers. Of the motives for this gift, whether gratitude for favors past or to come, the English journal naturally knows nothing, but remarks: "British manufacturers can not be blamed for failing to secure business in the face of favoritism." It adds, somewhat ill-naturedly: "A conviction is fast spreading abroad that the Japanese Government and people are so fickle in their friendship and so unreliable in their commercial dealings that they are not worth taking the trouble to please."

It is gratifying to American independence to know that what trade we enjoy with China and Japan has been built up entirely on the merits of our productions, and is not likely to be jeopardized by misrepresentations or such pleadings as government agents are able to offer. In Japan, especially, the course adopted by our minister has created an excellent feeling in our favor in commercial circles, the most influential papers commenting frequently on the desirability of closer mercantile relations between Japan and the United States. In China much the same feeling prevails, except that the effect of our restrictive legislation against Chinese immigration and the bad treatment Chinese subjects have received in some parts of the country still weighs against us. That these adverse influences, provided their cause is not renewed, will ultimately disappear, there is little room to doubt, and with the progressive tendencies both China and Japan are at present exhibiting, American commercial enterprise, exerted in the right direction, is certain to develop the many and profitable opportunities for trade that these important markets afford.

Netherlands woolen industry.—Minister Isaac Bell, jr., writes:

The commission charged by the Industrial Convention of Brabant to inquire into the influence of the protection laws of France and Germany upon Netherlands industries, and especially with regard to the manufacture of woolen goods, has published its report.

According to the report it appears that since the introduction of the duty in France and Germany the exportation of the Netherlands goods towards those two countries has almost entirely ceased.

The following are the replies made by thirteen manufacturers of Tilbourg:

(1) During the year 1881 we exported to France goods valued at 475,000 francs. Since March 31, 1882, all exportation has ceased.

(2) During the years 1881 and 1882 we exported to France goods valued at 218,500 francs. Now we export nothing.

(3) From 1874 to 1879 goods in considerable quantities were exported to Germany. Since the imposition of the duty in that country the exportation has ceased.

(4) Before the introduction of the increased duties in France the exportation varied from 50,000 to 70,000 francs per annum. During recent years the exportation has amounted to nothing.

(5) Before the introduction of the present duty in Germany and France the exportation amounted to 100,000 florins per annum to Germany and 50,000 francs per annum to France. All exportation has now ceased.

(6) During the years 1881–1882 the exports to France were from 50,000 to 60,000 francs. At present there is nothing exported.

(7) An annual exportation of the value of 30,000 francs has completely ceased since the introduction of the duty in France.

(8) From 1870 to 1880 the exportations to France were from 2,000 to 10,000 francs. Now there is nothing done.

(9) For some years the exports were from 40,000 to 50,000 francs. Now it is completely finished.

(10) The exports to France and Germany have entirely ceased. Before the introduction of the duty in those countries it amounted to from 30,000 to 32,000 florins.

(11) The exports to Germany have ceased.

(12) The exports to France and Germany have ceased.

(13) An export business of 40,000 florins per annum has completely ceased since the introduction of the duties in Germany and France.

German emigration during 1886.—Consul Falkenbach, of Barmen, transmits the following:

Table giving the number of German emigrants to transatlantic sea-ports during the last sixteen years:

During the years—	Via Bremen.	Via Hamburg.	Via Stettin.	Via Antwerp.	Via Rotterdam and Amsterdam.	Via Hâvre.	Total.
1871	45,658	30,254	.....	.....	.....	287	76,199
1872	66,919	57,615	.....	1,116	.....	2,593	128,243
1873	48,608	51,432	.....	3,508	.....	6,776	110,414
1874	17,907	24,093	1,586	1,576	.....	2,511	47,623
1875	12,613	15,826	268	2,066	.....	1,489	32,262
1876	10,972	12,.06	20:	4,488	.....	1,258	29,626
1877	9,328	10,725	75	1,836	.....	939	22,903
1878	11,329	11,827	85	976	.....	1,399	25,616
1879	15,828	13,165	245	4,089	.....	2,485	35,812
1880	51,627	42,787	552	11,224	.....	10,757	116,947
1881	96,510	84,425	1,434	26,178	.....	10,251	220,798
1882	96,116	71,164	1,936	24,653	.....	9,590	203,459
1883	87,739	55,666	546	22,168	.....	7,455	173,574
1884	75,776	49,965	750	17,075	.....	5,393	148,979
1885	52,328	35,335	1,237	14,742	3,596	3,790	110,028
1886	40,224	27,714	709	10,040	3,188	.....	79,875
1871–'85	741,482	592,719	9,575	145,825	6,784	65,973	1,562,358

The port of destination can only be stated definitely of those German emigrants who sailed via German sea-ports or via Antwerp. The number of these emigrants during the last 16 years was 1,489,601, or 95.3 per cent. of the total emigration from Germany during the same period.

To—	Number.	Per cent.
United States of North America	1,421,692	95.44
Brazil	31,102	2.09
British North America	4,311	.29
Other American ports	12,591	.85
Total to America	1,469,756	98.67
Australia and Polynesia	15,802	1.06
Africa	3,414	.23
Asia	629	.04

Percentage of German emigration.

To—	In the year—			
	1871.	1876.	1881.	1886.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
United States	97.25	80.26	97.93	94.41
Brazil	1.20	12.10	1.00	2.67
British North America	.01	.04	.13	.48
Other American countries	.42	2.98	.42	1.39
America altogether	98.88	95.38	99.48	98.90
Australia and Polynesia	1.08	4.32	.35	.70
Africa	.02	.19	.15	.25
Asia	.02	.11	.02	.15

The number of non-German emigrants via German sea-ports and the number of German emigrants via German sea-ports, during the years 1886 and 1882 were as follows:

	German emigrants.	Non-German emigrants.
1886	66,647	99,827
1885	88,900	66,247
1884	126,511	68,986
1883	143,941	57,303
1882	173,431	62,528

The shifting in the proportion of the number of non-German emigrants to Germans during the last two years must, however, not be attributed to the fact that the German emigration via other than German sea-ports has increased; on the contrary, the same has decreased. The change is much more the result of the increasing emigration from foreign countries, particularly from Austria-Hungary, Russia, Scandinavia, and Roumania, via German sea-ports.

German emigrants (male and female) via Bremen, Hamburg, and Prussian seaports (Stettin) to transatlantic countries during the year 1886, according to their home and their destination.

Emigrated from—	Number of emigrants from Germany to transatlantic countries during 1886.			Of these emigrated via—		
	M.	F.	Total.	Bremen.	Hamburg.	Prussian seaports.
Prussia (provinces):						
East Prussia	826	767	1,593	705	863	25
West Prussia	4,010	4,025	8,035	4,924	2,951	160
Brandenburg	2,264	1,794	4,058	1,763	2,232	63
Pomerania	3,105	3,009	6,264	3,569	2,380	315
Posen	3,162	3,291	6,453	3,484	2,849	120
Silesia	1,552	1,281	2,833	1,271	1,556	6
Saxony	927	637	1,564	844	720	.....
Sleswick-Holstein	2,260	1,851	4,111	494	3,617	.....
Hanover	3,370	2,503	5,873	4,885	984	4
Westphalia	867	648	1,515	1,316	199	.....
Hesse-Nassau	1,417	1,221	2,638	2,140	497	1
Rhineland	610	388	998	751	242	.....
Hohenzollern	16	23	39	26	13	.....
Total Prussia	24,476	21,493	45,969	26,172	19,108	694
Bavaria:						
Right of the Rhine	3,028	2,506	5,529	4,426	1,103	.....
Palatinate	254	254	508	500	8	.....
Saxony	1,306	936	2,332	1,353	975	4
Würtemberg	1,474	1,403	2,877	2,260	617	.....
Baden	680	595	1,284	992	285	7
Hesse	746	607	1,353	1,123	230	.....
Mecklenburg-Schwerin	606	572	1,298	250	987	1
Saxony-Weimar	138	116	254	182	72	.....
Mecklenburg-Strelitz	70	79	149	55	94	.....
Oldenburg	540	378	918	811	107	.....
Brunswick	158	94	252	124	128	.....
Saxe-Meiningen	145	102	247	181	66	.....
Saxe-Altenburg	41	31	72	53	19	.....
Saxe-Coburg-Gotha	118	94	212	177	35	.....
Anhalt	51	31	82	46	36	.....
Schwarzburg-Sondershausen	30	25	55	34	19	2
Schwarzburg-Rudolfstadt	50	47	97	82	15	.....
Waldeck	50	47	97	81	16	.....
Reuss:						
Older lineage	29	14	43	31	12	.....
Younger lineage	56	35	91	35	56	.....
Shaumburg-Lippe	23	22	45	39	6	.....
Lippe-Detmold	105	67	172	150	22	.....
Lübeck	57	36	93	11	82	.....
Bremen	447	429	876	798	78	.....
Hamburg	965	683	1,648	197	1,450	1
Alsace-Lorraine	80	74	154	61	93	.....
Total	35,877	30,770	66,647	40,224	25,714	709

German emigrants (male and female) via Bremen, Hamburg, and Prussian seaports (Stettin) to transatlantic countries, etc.—Continued.

Emigrated from—	Emigrated to—											
	United States.		British North America.		Mexico and Central America.		West Indies.		Brazil.		Argentine States.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Prussia (provinces):												
East Prussia	788	787	10	14	....	....	....	....	17	4	6	10
West Prussia	3,906	3,987	50	58	....	....	1	....	18	15	8	4
Brandenburg	1,992	1,664	8	3	1	....	1	....	86	44	65	44
Pomerania	3,115	3,080	18	16	1	....	....	....	28	12	19	5
Posen	3,115	3,265	11	9	1	....	1	....	24	15	3	....
Silesia	1,207	1,100	10	2	1	1	1	1	184	154	20	11
Saxony	836	581	15	12	2	....	3	1	38	19	18	12
Sleswick-Holstein	2,095	1,770	6	5	3	....	3	....	37	19	29	17
Hanover	3,204	2,425	4	4	3	....	....	....	81	46	17	4
Westphalia	884	635	1	2	2	....	1	....	15	1	5	4
Hesse-Nassau	1,350	1,208	7	3	2	....	....	....	14	4	14	6
Rhineland	525	388	....	....	1	....	....	....	37	24	18	8
Hohenzollern	16	23	....	....	....	....	....	....	....	....	....	....
Total Prussia	23,078	20,708	146	128	17	1	11	2	574	357	222	125
Bavaria:												
Right of the Rhine	2,962	2,485	9	2	....	....	....	....	27	9	18	9
Palatinate	250	254	....	....	....	....	....	....	....	....	3	....
Saxony	1,222	866	7	9	1	....	....	....	90	35	32	8
Würtemberg	1,396	1,356	....	....	....	....	3	1	12	2	15	10
Baden	658	568	2	3	....	....	....	1	11	1	8	3
Hesse	726	606	1	....	....	....	....	....	6	....	5	....
Mecklenburg-Schwerin	619	551	1	2	1	....	....	....	16	11	7	2
Saxony-Weimar	124	110	1	2	....	....	....	....	7	4	4	....
Mecklenburg-Strelitz	66	77	....	....	....	....	....	....	1	....	....	....
Oldenburg	519	364	....	....	1	1	2	....	7	1	5	10
Brunswick	180	88	....	....	1	....	....	....	6	3	11	7
Saxe-Meiningen	141	102	....	....	....	....	....	....	3	....	1	....
Saxe-Altenburg	40	28	....	....	....	....	....	....	1	3	....	....
Saxe-Coburg-Gotha	106	88	....	....	....	....	....	....	3	4	6	3
Anhalt	44	31	....	....	1	....	....	....	6	....	....	....
Schwarzburg-Sondershausen	27	24	....	....	....	....	....	....	2	1	....	....
Schwarzburg-Rudolfstadt	46	45	....	....	....	....	....	....	1	....	....	....
Waldeck	50	47	....	....	....	....	....	....	....	....	....	....
Reuss:												
Older lineage	26	14	....	....	....	....	....	....	....	....	1	....
Younger lineage	47	29	....	....	....	....	....	....	5	5	2	....
Schaumburg-Lippe	21	22	....	....	....	....	....	....	....	....	2	....
Lippe-Detmold	101	64	....	....	....	....	....	....	1	....	....	....
Lübeck	35	25	....	....	2	....	1	....	4	2	3	....
Bremen	400	410	....	....	1	1	5	2	8	5	18	9
Hamburg	657	554	11	6	4	....	7	1	75	39	62	20
Alsace-Lorraine	79	74	....	....	....	....	....	....	1	....	....	....
Total	33,555	29,594	178	159	29	3	29	7	867	482	420	206

German emigrants (male and female) via Bremen, Hamburg, and Prussian seaports (Stettin) to transatlantic countries, etc.—Continued.

Emigrated from—	Emigrated to—											
	Peru.		Chili.		Other American States.		Africa.		Asia.		Australia and Polynesia.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Prussia (provinces):												
East Prussia	....	....	1	....	....	....	6	1	....	....	4	1
West Prussia	....	....	1	....	....	....	2	....	....	....	18	11
Brandenburg	....	....	39	15	9	3	18	4	12	9	33	8
Pomerania	....	....	....	....	1	....	4	1	1	....	13	5
Posen	....	....	2	....	....	....	1	....	....	....	5	2
Silesia	....	....	1	2	4	1	6	....	1	2	17	8
Saxony	....	2	1	2	2	....	2	4	1	....	11	4
Sleswick-Holstein	1	....	20	16	9	5	19	2	8	8	30	8
Hanover	....	1	6	1	5	2	11	7	6	2	30	11
Westphalia	....	....	6	3	1	1	1	1	....	....	2	1
Hesse-Nassau	3	1	8	1	4	....	1	2	6	....	7	1
Rhineland	....	....	10	1	1	2	4	10	3	....	11	....
Hohenzollern	....	....	....	....	....	....	....	....	....	....	....	....
Total Prussia	4	4	94	41	36	14	75	32	38	21	181	60
Bavaria:												
Right of the Rhine	....	....	1	....	2	....	2	....	4	1	3	....
Palatinate	....	....	....	....	....	....	....	....	....	....	1	....
Saxony	1	....	6	3	8	8	7	5	3	....	19	2
Würtemberg	1	....	1	....	2	....	7	4	2	2	45	23
Baden	1	....	....	....	1	....	4	....	....	....	9	4
Hesse	....	....	....	....	....	....	....	1	1	....	7	1
Mecklenburg-Schwerin	1	....	3	2	....	....	7	4	2	....	9	....
Saxony-Weimar	....	....	....	....	....	....	....	....	....	....	2	....
Mecklenburg-Strelitz	....	....	....	....	....	....	1	....	....	....	2	2
Oldenburg	....	....	....	....	1	....	1	1	....	....	4	1
Brunswick	2	....	....	....	4	....	....	....	1	....	3	1
Saxe-Meiningen	....	....	....	....	....	....	....	....	....	....	....	....
Saxe-Altenburg	....	....	....	....	....	....	....	....	....	....	....	....
Saxe-Coburg-Gotha	....	....	....	....	....	....	....	....	....	....	3	4
Anhalt	....	....	....	....	....	....	....	....	....	....	....	....
Schwarzburg-Sondershausen	....	....	1	....	....	....	....	....	....	....	....	....
Schwarzburg-Rudolfstadt	....	....	....	....	1	....	....	....	....	....	2	2
Waldeck	....	....	....	....	....	....	....	....	....	....	....	....
Reuss:												
Older lineage	....	....	....	....	....	....	....	....	....	....	2	....
Younger lineage	1	....	1	1	....	....	....	....	....	....	....	....
Shaumburg-Lippe	....	....	....	....	....	....	....	....	....	....	....	....
Lippe-Detmold	....	....	3	3	....	....	....	....	....	....	....	....
Lübeck	....	....	....	....	2	....	1	....	....	....	9	9
Bremen	....	....	2	....	1	....	3	1	4	1	5	....
Hamburg	10	....	20	24	20	13	30	5	27	9	33	12
Alsace-Lorraine	....	....	....	....	....	....	....	....	....	....	....	....
Total	21	4	132	74	87	35	138	53	82	34	339	126

German emigration to transatlantic sea-ports via other than German sea-ports during the year 1886.

Emigrated from—	Number of German emigrants (male and female) via Antwerp during the year 1886.												
	In the whole.			Emigrated to—									
				United States.		Brazil.		Argentine States.		Uruguay.		Australia.	
	M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Prussia:													
Province of East Prussia	57	36	93	43	30	14	6	.....	.....	.....	.....	.....	.....
West Prussia	388	330	718	208	212	120	118	.....	.....	.....	.....	.....	.....
City of Berlin	58	36	94	51	35	.....	.....	6	1	.....	.....	1	.....
Province of Brandenburg	44	27	71	30	23	5	4	.....	.....	.....	.....	.....	.....
Pomerania	174	166	340	71	57	103	109	.....	.....	.....	.....	.....	.....
Posen	147	122	269	142	116	5	6	.....	.....	.....	.....	.....	.....
Silesia	62	35	97	40	19	22	16	.....	.....	.....	.....	.....	.....
Saxony	23	13	36	22	13	1	.....	.....	.....	.....	.....	.....	.....
Sleswick-Holstein	19	9	28	19	9	.....	.....	.....	.....	.....	.....	.....	.....
Hanover	67	24	91	66	24	1	.....	.....	.....	.....	.....	.....	.....
Westphalia	215	110	325	210	107	3	2	2	1	.....	.....	.....	.....
Hesse-Nassau	203	122	325	190	111	10	9	.....	.....	3	2	.....	.....
Rhineland	1,235	735	1,970	1,203	711	31	20	.....	.....	1	4	.....	.....
Hohenzollern	25	9	34	25	9	.....	.....	.....	.....	.....	.....	.....	.....
Not known	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total from Prussia	2,718	1,774	4,492	2,390	1,476	315	290	8	2	4	6	1	.....
Bavaria:													
Right of Rhine	588	359	947	578	354	10	5	.....	.....	.....	.....	.....	.....
Palatinate	664	420	1,084	661	416	3	4	.....	.....	.....	.....	.....	.....
Saxony	34	22	56	30	20	3	2	1	.....	.....	.....	.....	.....
Wurtemberg	469	371	840	456	365	9	6	.....	.....	.....	.....	4	.....
Baden	907	642	1,549	900	641	1	1	.....	.....	.....	.....	.....	.....
Hesse	219	153	372	216	152	3	1	.....	.....	.....	.....	.....	.....
Mecklenburg-Schwerin	16	8	24	16	8	.....	.....	.....	.....	.....	.....	.....	.....
Saxe-Weimar	7	6	13	7	6	.....	.....	.....	.....	.....	.....	.....	.....
Mecklenburg-Strelitz	3	2	5	3	2	.....	.....	.....	.....	.....	.....	.....	.....
Oldenburg	49	23	72	20	14	29	9	.....	.....	.....	.....	.....	.....
Brunswick	5	3	8	5	3	.....	.....	.....	.....	.....	.....	.....	.....
Saxe-Meiningen	4	1	5	4	1	.....	.....	.....	.....	.....	.....	.....	.....
Saxe-Altenburg	2	2	4	2	2	.....	.....	.....	.....	.....	.....	.....	.....
Saxe-Coburg-Gotha	4	1	5	4	1	.....	.....	.....	.....	.....	.....	.....	.....
Anhalt	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schwarzburg-Sondershausen	2	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schwarzburg-Rudolstadt	3	1	4	3	1	.....	.....	.....	.....	.....	.....	.....	.....
Waldeck	3	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reuss, older lineage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reuss, younger lineage	2	1	3	2	1	.....	.....	.....	.....	.....	.....	.....	.....
Schaumburg-Lippe	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lippe-Detmold	2	2	4	2	2	.....	.....	.....	.....	.....	.....	.....	.....
Lubeck	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bremen	7	.....	7	2	.....	1	.....	.....	.....	.....	.....	4	.....
Hamburg	17	10	27	12	8	.....	.....	.....	.....	.....	.....	5	2
Alsace-Lorraine	260	188	448	237	187	3	1	.....	.....	.....	.....	.....	.....
Not known	36	30	66	9	4	.....	.....	.....	.....	.....	.....	27	26
Total German Empire	6,021	4,019	10,040	5,590	3,664	377	319	9	2	4	6	41	28

NOTE.—Two thousand one hundred and twenty-five German emigrants sailed via Rotterdam and 1,063 via Amsterdam during 1886, mostly to the United States.

Imports and Exports at Shanghai.—Consul-General Kennedy transmits the following tables:

Imports and exports at Shanghai, April, May, and June, 1887.

IMPORTS.

Description of goods.	1884.	1885.	1886.	1887.
Cotton goods:				
Shirtings, gray.....pieces..	$1,086,390	$1,884,140	$1,712,542	$1,658,587
Shirtings, white, plain.....do....	468,808	668,218	550,418	517,779
Shirtings, dyed, plain.....do....	37,888	46,104	41,779	29,790
Shirtings, white, spotted, and brocaded.....pieces..	958	1,478	7,078	798
Shirtings, dyed, spotted, and brocaded.....pieces..	16,945	10,175	11,136	14,446
T-cloths.....do....	615,738	590,619	542,360	574,689
Drills, English.....do....	29,446	58,814	123,254	99,512
Jeans, English.....do....	18,630	48,018	42,730	63,323
Drills, American.....do....	91,920	131,745	166,810	228,705
Jeans, American.....do....	14,000	.....	.....	7,040
Drills, Dutch.....do....	1,500	.....	3,840	14,260
Jeans, Dutch.....do....	4,000	2,400	.....	16,190
Sheetings, English.....do....	87,877	93,374	80,537	147,830
Sheetings, American.....do....	220,424	296,395	349,720	457,915
Chintzes and furnitures.....do....	101,621	116,778	129,197	134,290
Turkey red cloths and cambrics....do....	72,677	139,846	85,332	67,568
Damasks, dyed.....do....	28	11	861	.....
Velvets.....do....	7,282	10,798	10,408	11,203
Velveteens.....do....	1,688	3,321	4,104	4,825
Dimities.....do....	.....	.....	9	8
Lawns and muslins.....do....	99,685	79,472	76,113	85,160
Handkerchiefs.....dozens..	87,451	100,958	146,678	155,628
Yarn.....piculs..	11,219	33,199	43,825	70,664
Woolen goods:				
Camlets.....pieces..	35,080	29,497	36,142	42,638
Lastings.....do....	18,100	32,804	49,331	36,170
Lastings, crape.....do....	360	122	766	779
Long ells.....do....	21,571	17,480	25,780	22,183
Lusters and Orleans, figured.....do....	22,006	35,477	30,499	16,394
Lusters and Orleans, plain.....do....	545	1,645	1,799	3,221
Spanish stripes.....do....	10,328	18,833	23,631	9,152
Cloth, broad, habit, and medium....do....	977	2,365	7,443	5,009
Metals:				
Iron, nail-rod and bar.....piculs..	70,951	107,055	153,185	110,424
Lead.....do....	959	7,707	60,197	68,325
Quicksilver.....do....	134	548	403	410
Steel.....do....	4,256	8,333	5,905	7,359
Tin, in slabs.....do....	4,679	3,337	3,943	4,685
Tin-plates.....do....	2,689	2,259	2,087	2,175
Copper, bar and rod.....do....	2,125	11,761	3,822	4
Opium:				
Malwa.....do....	7,782	6,997.29	7,137.77	5,252.75
Patna.....do....	1,099.20	2,022.01	3,660.17	1,509.75
Benares.....do....	694.80	1,946.40	928.80	954
Persian.....do....	37	5	108	7
Native.....do....	138.47	27.09	.08	1.56¼
Foreign sundries:				
Coal.....tons..	59,602	61,890	70,463	58,690
Ginseng, Japan, second quality....piculs..	28	35	7	38
Matches, wood.....gross	43,800	440,772	299,385	250,189
Needles.....mille..	191,050	360,751	425,261	482,337
Oil, kerosene.....gallons..	2,598,720	3,226,500	5,995,710	933,490
Pepper, black.....piculs..	5,148	5,992	6,083	4,858
Rattans.....do....	4,663	9,415	9,337	5,420
Sandal-wood.....do....	11,054	12,883	13,361	12,482
Sapan-wood.....do....	11,791	16,391	17,596	9,619
Sea-weed.....do....	25,085	38,684	52,604	29,820
Tea, Japan.....do....	45	.....	25	1
Window glass.....boxes..	822	12,700	18,392	14,058
Native sundries:				
Bean-cake.....piculs..	8,784	106,248	4,581	14,544
Coal.....do....	235,058	84,097	76,040	88,852
Cotton, raw.....do....	1,071	179	220	112
Hemp.....do....	12,776	19,167	14,008	18,319
Indigo, liquid.....do....	4,008	3,909	19,135	13,058
Nutgalls.....do....	9,512	6,153	3,995	9,321
Oil, wood.....do....	24,909	19,948	21,109	20,631
Rice.....do....	22,436	26,129	128,393	111,490
Silk, raw.....do....	10	30	30	7
Silk, yellow.....do....	689	700	558	200
Straw braid.....do....	21,771	21,145	22,782	51,406
Straw hats.....pieces..	1,679,320	2,647,862	2,325,951	3,796,854

Imports and exports at Shanghai, April–June, 1887—Continued.

IMPORTS—Continued.

Description of goods.	1884.	1885.	1886.	1887.
Native sundries—Continued.				
Sugar, brown ..... piculs..	$208,275	$209,852	$244,342	$239,867
Sugar, white ..... do....	214,608	252,558	175,809	266,346
Tallow, vegetable ..... do....	8,571	4,233	4,720	7,980
Tea, black ..... do....	65,454	49,312	56,387	82,115
Tea, green ..... do....	8,642	9,776	14,565	7,902
Tea, brick ..... do....	44,760	39,326	37,706	44,096
Tobacco, leaf ..... do....	14,229	9,734	5,805	7,858
Tobacco, prepared ..... do....	24,218	24,536	21,310	22,847
Wax, white ..... do....	2,388	2,954	4,808	3,274

EXPORTS.

Bean-cake ..... piculs..	$2,367	$9,213	$28,241	$61,568
Beans and pease ..... do....	49,538	61,631	31,358	112,000
Chinaware, fine ..... do....	295	381	422	787
Chinaware, coarse ..... do....	999	1,971	1,046	1,563
Cotton, raw ..... do....	8,637	46,243	34,072	60,179
Cuttle-fish ..... do....	7,566	3,415	6,407	5,451
Feathers ..... do....	2,344	2,547	3,381	4,408
Gypsum ..... do....	13,400	21,840	10,797	7,576
Hemp ..... do....	14,423	19,212	15,438	21,401
Hides, cow and buffalo ..... do....	33,197	24,644	28,577	31,222
Lily flowers, dried ..... do....	5,629	3,093	7,677	7,174
Medicines ..... do....	43,910	52,124	44,777	52,422
Musk ..... catties..	792½	774½	871½	739½
Nankeens ..... piculs..	6,628	10,166	6,490	7,198
Nutgalls ..... do....	11,835	4,866	3,472	10,610
Oil, wood ..... do....	11,682	7,654	10,200	16,284
Paper, first quality ..... do....	9,092	12,275	10,157	11,941
Paper, second quality ..... do....	34,166	33,272	42,471	23,554
Rhubarb ..... do....	1,686	2,603	1,874	1,538
Rice ..... do....	148,373	39,801	1,943,210	664,095
Rice, free ..... do....	507,985	100,514	184,329	477,958
Rice, tribute ..... do....	472,467	216,074	588,658	725,977
Silk, raw, thrown, yellow, and reeled, from dupions ..... piculs..	8,286	2,707	5,295	7,969
Silk, wild ..... do....	2,631	2,589	3,459	5,226
Silk, waste ..... do....	5,531	4,070	5,334	5,760
Silk, piece goods, fine ..... do....	1,960	2,442	2,391	2,706
Silk, piece goods, coarse ..... do....	309	396	494	581
Skins, goat ..... pieces..	11,349	152,735	44,229	30,040
Straw braid ..... piculs..	23,994	20,738	20,688	41,714
Straw hats ..... pieces..	2,287,730	1,962,365	2,444,203	3,468,800
Sugar, brown ..... piculs..	115,306	167,224	139,014	186,489
Sugar, white ..... do....	147,574	154,183	95,738	183,428
Tea, black ..... do....	60,156	45,457	59,855	75,995
Tea, green ..... do....	6,800	9,899	2,357	2,178
Tea, brick ..... do....	41,666	40,548	41,926	44,747
Tobacco, leaf ..... do....	8,522	3,812	3,863	4,629
Tobacco, prepared ..... do....	13,115	15,426	13,541	17,682
Vermicelli ..... do....	8,297	17,544	20,730	34,917
Wax, white ..... do....	1,605	2,181	2,500	2,644
Wheat ..... do....	34,157	55,015	106,991	78,066
Wool, camel's ..... do....	4,871	5,261	4,651	5,754
Wool, sheep's ..... do....	5,952	4,715	3,135	6,220

Corn imported into Sweden from the United States in 1886.—Minister Magee reports, under date of October 12, 1887:

The import of corn, or maize, as it is listed, into the Kingdom of Sweden for the yea 1886 amounted to about 12,000 English tons. This was all exported from the United States. Until the present year there has been no duty upon the importation of this article; but at the last session of the Diet an import duty of 2 kroner per 100 kilos, or about 53 cents for each 220 pounds' weight, was placed upon the importation. The operation of this import has had the effect to reduce very largely the importation of corn, as it has so increased the price as to cause other and cheaper articles to be used in its place in such industries where it was formerly employed, viz: starch, yeast, and spirits. It has likewise reduced the tonnage, as no other article has been found to take its place on shipboard.

This perhaps is the most serious effect the law has upon American commerce, as the entire supply was furnished from the United States, and so long as the import duty remains at a figure equal to the cost of production by the farmer, the Swedish consumer can not afford to pay the enhanced price.

The duty was imposed in obedience to a sentiment, the temperance advocates in the Diet insisting that the enhanced cost of "brourine," the universal spirituous drink of the country, would produce less drunkenness. So far this anticipated result has not been achieved. It is possible the law may be repealed this winter, but the outlook is not very encouraging.

AGRICULTURAL STATISTICS OF NEW ZEALAND.

[From the New Zealand census tables, 1876. Land, live stock, dairy produce, and agricultural machines.]

Summary (by provincial districts) showing the extent of occupied holdings over one acre, land fenced, and the number of live stock and poultry in provincial districts (exclusive of holdings occupied by and stock belonging to Maoris), according to the census of March, 1886, and a comparison with the results for the census of 1881.

LAND AND STOCK.

Provincial districts.	Extent of occupied holdings over one acre.*							Land fenced.
	Total.	Freehold.	Rented from private individuals.	Rented from public bodies.	Rented from natives (including reserves rented).	Held from Crown for other than pastoral purposes (including deferred payments, etc.).	Rented from Crown for pastoral purposes only.	
	Acres.	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*
Auckland.....	3,240,619	2,171,048	302,817	29,688	518,528	88,148	130,390	1,243,027
Taranaki	363,013	181,184	48,910	8,280	75,027	49,662	.....	200,205
Wellington	2,342,857	1,479,677	287,518	29,439	374,578	37,085	134,560	1,457,804
Hawke's Bay ..	2,352,574	1,121,974	197,980	43,009	910,266	30,204	49,051	1,559,008
Marlborough ..	1,784,876	756,362	40,854	1,665	2,700	6,787	977,008	1,086,170
Nelson.....	1,738,322	760,551	65,053	11,411	11,975	110,010	778,723	902,985
Westland.....	489,063	24,522	3,179	9,430	3,884	34,173	413,875	7,351
Canterbury....	5,740,437	2,458,067	399,053	184,141	10,015	47,000	2,642,171	3,628,534
Otago	9,645,782	2,727,460	430,413	540,600	8,080	293,441	5,645,888	5,978,958
Chatham Isl'ds	151,140	47,451	1,110	.....	102,585	.....	.....	93,065
Total Mar., 1886	*27,848,690	11,728,296	1,776,987	857,753	2,017,588	696,510	10,771,616	+16,253,797
Total Apr., 1881	26,845,466	10,309,170	1,544,455	563,124	2,266,164	528,984	11,638,569	16,193,574
Increase since 1881.....	1,003,224	1,419,066	232,532	294,629	.....	172,526	.....	60,223
Decrease since 1881.....	.....	.....	.....	.....	248,576	.....	866,953	.....
Centesimal increase	3.74	13.76	15.05	52.32	.....	32.92	.....	0.37
Centesimal decrease	.....	.....	.....	.....	10.97	.....	7.44	.....

***Summary (by provincial districts) showing the extent of occupied holdings over one acre, land fenced, and the number of live stock and poultry, etc.*—Continued.**

Provincial districts.	Live stock.										Poultry.
	Total of all descriptions.	Horses.	Brood mares (included in the foregoing).	Mules and asses.	Cattle (including calves).	Breeding cows (included in the foregoing).	Sheep (including lambs).‡	Breeding ewes (included in the foregoing).	Goats.	Pigs.	
Auckland	1,074,162	36,822	6,275	82	205,267	68,029	790,936	334,403	2,129	38,926	372,446
Taranaki	236,003	8,514	1,247	3	79,848	21,641	132,270	46,103	84	15,284	62,091
Wellington	2,306,683	23,864	3,790	44	185,930	55,746	2,064,442	854,613	1,779	30,624	193,689
Hawke's Bay	2,565,887	11,053	1,438	10	60,944	18,160	2,487,105	1,023,198	249	6,526	63,969
Marlborough	806,777	5,093	796	6	15,569	4,818	775,568	249,604	641	9,900	35,102
Nelson	895,621	7,750	1,270	13	36,295	12,931	898,633	310,362	1,660	11,270	97,126
Westland	19,938	1,477	185	3	7,488	2,428	7,726	3,713	1,778	1,466	36,826
Canterbury	5,226,154	43,504	6,345	76	111,158	40,010	4,958,560	1,892,599	536	112,320	391,730
Otago	4,698,878	48,941	8,413	57	150,189	55,173	4,446,855	1,719,341	1,356	51,480	424,924
Chatham Isl'ds	63,650	364	94	3	670	200	62,500	23,419	8	105	1,118
Total Mar., 1886	17,893,753	187,382	29,853	297	853,358	279,136	‡16,564,595	6,457,355	10,220	277,901	1,679,021
Total Apr., 1881	14,057,126	161,736	29,989	362	698,637	226,819	12,985,085	4,948,843	11,223	200,083	1,566,114
Increase since 1881	3,836,627	25,646	.....	.....	154,721	52,317	3,579,510	1,508,512	.....	77,818	112,907
Decrease since 1881	.....	.....	136	65	.....	.....	.....	.....	1,003	.....	.....
Centesimal increase	27.29	15.86	.....	.....	22.15	23.06	27.57	30.48	.....	38.89	7.21
Centesimal decrease	.....	.....	0.45	17.95	.....	.....	.....	.....	8.94	.....	.....

NOTE.—The Maori census of 1886 showed a total of 112,850 sheep, 42,103 cattle, and 92,091 pigs, which are not included in the above numbers.

* Besides the extent of occupied land shown in this table, 768,281 acres of unoccupied and unused freehold land were returned in the census schedules

† In addition to this acreage the returns showed a total of 986,860 chains of fencing.

‡ These numbers will not agree with those that will be published by the sheep department. (1) The census returns are for March 28—the returns to the sheep department are made up to May 31, while a large number of sheep are slaughtered in the interval; (2) the census returns include all lambs; the returns to the sheep department do not include lambs under three months old.

The number of occupied holdings of over one acre in extent in the different provincial districts, classified according to size, according to the census of March, 1886, and a comparison with the results of the census of 1881.

[This table deals with the full extent of occupied land, including native leases, but exclusive of Crown pastoral leases. A property part free and part leased has been considered as one holding, and placed according to its full size.]

Provincial districts.	Holdings.													
	Total.	Over 1 acre to 10 inclusive.	Over 10 acres to 50 inclusive.	Over 50 acres to 100 inclusive.	Over 100 acres to 200 inclusive.	Over 200 acres to 320 inclusive.	Over 320 acres to 640 inclusive.	Over 640 acres to 1,000 inclusive.	Over 1,000 acres to 5,000 inclusive.	Over 5,000 acres to 10,000 inclusive.	Over 10,000 acres to 20,000 inclusive.	Over 20,000 acres to 50,000 inclusive.	Over 50,000 acres to 100,000 inclusive.	Upwards of 100,000 acres.
Auckland	7,701	1,961	1,502	1,166	1,359	684	535	183	228	41	29	13	5	1
Taranaki	2,057	273	352	507	453	213	192	37	28	1	.....	1	.....	.....
Wellington	4,630	1,196	930	618	624	363	303	170	265	32	28	7	4	.....
Hawke's Bay	1,522	425	410	197	162	61	63	27	83	30	34	25	3	2
Marlborough	862	247	188	102	136	53	46	21	34	11	12	10	2	.....
Nelson	2,121	424	480	347	383	187	164	58	55	7	4	10	2	.....
Westland	371	94	120	54	45	24	21	6	3	3	1	.....	.....	.....
Canterbury	8,140	2,273	1,910	1,004	1,081	579	564	213	359	56	28	15	3	.....
Otago	9,048	2,269	1,614	959	1,680	996	824	261	340	39	35	23	7	1
Chatham Islands	33	10	1	.....	3	1	2	2	6	2	4	2	.....	.....
Total census 1886	36,485	9,172	7,507	5,014	5,926	3,161	2,804	977	1,396	222	170	106	26	4
Total census 1881	30,832	7,680	6,498	4,402	5,066	2,453	2,258	828	1,097	185	169	111	18	7

NOTE.—Lands occupied by Maoris are not included in the above table.

The acreage of occupied lands in holdings over one acre in extent, classified according to size.

[This table deals with the full extent of occupied land, including native leases, but excluding Crown pastoral leases.]

Sizes of holdings.	Number of holdings.	Acreage.		
		Freehold.	Leasehold, etc.*	Total.
Over 1 to 10 acres, inclusive	9,172	24,406	18,160	42,566
Over 10 to 50 acres, inclusive	7,507	140,870	78,548	219,418
Over 50 to 100 acres, inclusive	5,014	262,299	128,444	390,743
Over 100 to 200 acres, inclusive	5,926	604,752	299,598	904,350
Over 200 to 320 acres, inclusive	3,161	533,891	292,625	826,516
Over 320 to 640 acres, inclusive	2,804	899,881	376,140	1,276,021
Over 640 to 1,000 acres, inclusive	977	548,176	236,159	787,335
Over 1,000 to 5,000 acres, inclusive	1,396	1,980,719	994,376	2,975,095
Over 5,000 to 10,000 acres, inclusive	222	1,179,667	438,218	1,617,885
Over 10,000 to 20,000 acres, inclusive	170	1,866,215	652,953	2,519,168
Over 20,000 to 50,000 acres, inclusive	106	2,246,064	824,496	3,070,560
Over 50,000 to 100,000 acres, inclusive	26	1,120,836	715,121	1,835,957
Upwards of 100,000 acres	4	320,460	291,000	611,460
Total	36,485	11,728,236	5,348,838	17,077,074

NOTE.—Lands occupied by Maoris are not included in the above table.
* Under "Leasehold," etc., are included lands returned by their occupiers under the following heads: 1. Rented from private individuals; 2. Rented from public bodies; 3. Rented from natives (including reserves rented); 4. Held from Crown for other than pastoral purposes (including deferred payments, etc.).

Number and increase of live stock (exclusive of stock belonging to Maoris) in the several provincial districts of New Zealand in the years 1858, 1861, 1864, 1867, 1871, 1874, 1878, 1881, *and* 1886, *respectively.*

Provincial districts.	Year.	Horses.	Asses and mules.	Cattle.	Sheep.	Goats.	Pigs.	Poultry.
Auckland	1858	3,839	7	31,700	58,792	3,079	11,461	(*)
	1861	5,621	20	36,482	67,808	5,999	12,612	82,861
	1864	7,482	113	42,294	73,151	3,264	13,072	105,404
	1867	9,436	106	53,066	172,080	3,382	25,814	145,222
	1871	11,620	64	80,443	210,760	4,032	34,008	184,827
	1874	14,555	50	105,595	340,241	5,107	32,439	256,439
	1878	20,932	62	127,575	540,277	4,737	38,459	267,182
	1881	25,545	124	158,181	534,980	3,099	35,040	307,184
	1886	26,822	82	205,267	790,966	2,129	38,926	372,446
Taranaki	1858	452	2	4,052	16,000	55	1,931	(*)
	1861	220	.....	2,171	10,566	33	245	2,283
	1864	737	.....	4,229	12,350	27	368	4,570
	1867	1,441	4	8,406	19,772	62	2,112	13,807
	1871	1,825	9	7,966	24,281	136	5,032	21,509
	1874	2,512	20	17,621	51,321	176	3,598	28,189
	1878	4,084	2	33,929	81,378	171	7,578	37,178
	1881	5,959	4	51,846	69,418	109	9,221	48,619
	1886	8,514	3	79,848	132,270	84	15,284	62,091
Wellington	1858	3,199	43	35,799	155,994	2,896	11,994	(*)
	1861	5,117	42	49,328	247,940	2,856	11,670	38,685
	1864	7,356	90	49,200	411,502	1,016	13,073	42,064
	1867	10,597	49	56,211	754,026	1,268	20,283	87,643
	1871	11,246	32	75,202	714,094	1,081	22,699	84,072
	1874	13,402	29	84,352	1,116,965	1,108	15,479	103,776
	1878	18,807	25	99,284	1,396,305	589	23,581	152,104
	1881	21,149	51	140,951	1,547,167	878	27,061	177,396
	1886	23,864	44	185,930	2,064,442	1,779	30,624	193,689
Hawke's Bay	1858	727	8	4,492	180,320	880	1,555	(*
	1861	1,782	9	8,320	312,459	974	1,603	9,823
	1864	2,780	9	14,552	537,094	1,501	2,176	11,682
	1867	4,078	14	11,783	841,814	449	3,325	21,914
	1871	4,375	54	17,485	904,416	220	4,864	36,289
	1874	5,362	4	22,818	1,184,387	114	2,571	38,954
	1878	6,758	2	27,745	1,572,544	70	5,273	53,027
	1881	7,561	9	36,213	1,908,418	119	6,008	68,970
	1886	11,053	10	60,944	2,487,105	249	6,526	63,969

* Poultry not enumerated in 1858.

Number and increase of live stock in New Zealand, etc.—Continued.

Provincial districts.	Year.	Horses.	Asses and mules.	Cattle.	Sheep.	Goats.	Pigs.	Poultry.
Marlborough	1861	1,519	17	8,474	368,886	1,099	1,452	6,333
	1864	2,735	16	7,488	456,374	3,980	2,708	9,516
	1867	2,608	24	7,913	611,757	2,317	5,243	16,173
	1871	2,646	28	8,860	604,808	1,274	9,429	21,633
	1874	3,160	21	9,758	734,139	1,213	4,084	26,057
	1878	3,758	13	8,176	799,902	1,123	8,258	28,496
	1881	4,454	10	9,919	760,781	359	4,667	35,020
	1886	5,093	6	15,509	775,568	641	9,900	35,102
Nelson (including Marlborough territory in 1858).	1858	2,266	11	19,435	398,041	3,820	5,628	(*)
	1861	2,360	17	11,100	181,367	419	2,985	23,298
	1864	3,597	16	15,825	341,281	522	4,033	25,579
	1867	4,277	24	15,894	523,799	749	8,822	49,090
	1871	4,518	66	20,602	523,558	901	9,889	76,553
	1874	4,749	18	25,798	591,384	1,244	7,291	83,724
	1878	6,220	20	25,785	626,331	1,598	9,071	87,125
	1881	6,034	13	31,620	631,286	1,690	9,497	93,734
	1886	7,750	13	36,295	838,633	1,660	11,270	97,126
Westland	1867	610	9	2,108	852	247	1,585	9,636
	1871	759	9	2,668	4,588	731	1,811	30,626
	1874	924	17	4,509	3,808	1,179	805	38,819
	1878	1,182	8	7,025	6,927	2,040	1,982	38,786
	1881	1,103	6	7,944	4,428	2,098	1,722	37,749
	1886	1,477	3	7,486	7,726	1,778	1,406	36,826
Canterbury (including Westland territory in 1858, 1861, 1864).	1858	2,749	46	20,739	495,580	724	6,680	(*)
	1861	6,049	29	33,576	877,309	625	9,586	41,729
	1864	10,868	62	45,050	1,567,733	769	18,028	73,745
	1867	14,501	49	59,493	2,490,097	1,115	31,460	155,238
	1871	17,654	105	79,022	2,965,701	1,060	43,466	196,249
	1874	23,757	83	86,152	3 325,630	972	37,181	221,108
	1878	37,117	80	100,310	3,560,301	1,025	82,807	333,417
	1881	45,609	83	111,155	3,519,404	683	66,765	396,182
	1886	48,504	76	111,158	4,958,560	536	112,320	391,730
Otago (including Southland territory in 1858).	1858	1,680	5	20,987	223,597	343	1,485	(*)
	1861	4,790	15	34,544	619,853	156	2,218	26,412
	1864	11,225	30	57,594	1,300,418	742	6,475	66,408
	1867	14,458	41	81,982	2,498,260	1,521	12,543	148,042
	1871	21,020	30	109,404	2,898,814	2,231	16,823	189,514
As after reunion with Southland.	1874	30,840	30	136,921	4,326,988	3,113	20,253	263,209
	1878	38,108	29	147,929	4,446,023	2,835	30,278	335,007
	1881	43,019	61	150,150	3,952,022	2,167	39,907	409,622
	1886	48,941	57	150,189	4,446,855	1,356	51,480	424,924
Southland	1861	812	4	9,160	73,990	9	585	4,298
	1864	2,579	3	13,230	235,056	234	1,072	18,649
	1867	3,555	3	20,486	551,512	557	3,644	28,518
	1871	4,784	.....	34,206	887,631	768	3,201	29,829
Chatham Islands	1861	5	.....	135	1,400	21	224	436
	1864	50	.....	308	2,319	.....	291	802
	1867	145	.....	498	8,660	302	328	842
	1871	581	.....	715	16,978	.....	288	1,013
	1874	598	.....	804	20,990	50	180	978
	1878	807	.....	772	49,350	60	150	1,100
	1881	708	1	658	62,191	12	180	1,638
	1886	364	3	670	62,500	8	105	1,118
Totals for the colony	1858	14,912	122	137,204	1,523,324	11,797	40,734	(*)
	1861	28,275	153	193,285	2,761,383	12,191	43,270	236,098
	1864	49,409	339	249,760	4,987,273	12,005	61,276	378,414
	1867	65,715	328	312,835	8,418,579	11,964	115,104	676,065
	1871	81,028	397	436,592	9,700,629	12,434	151,460	872,174
	1874	99,859	267	494,917	11,704,853	14,276	123,921	1,058,198
	1878	137,768	241	578,490	13,069,338	14,248	207,337	1,323,542
	1881	161,730	362	698,037	12,985,085	11,223	200,088	1,566,114
	1886	187,382	297	853,358	16,564,595	10,220	277,901	1,679,021

* Poultry not enumerated in 1858.

Annual production of butter and cheese, the number of agricultural machines, and the quantity of grain in hand, in provincial districts, according to the census of March, 1886; and a comparison with the results for the census of 1881:

Provincial districts.	Weight of—		Number of—						Quantity on hand of—			
	Annual production of—		Threshing-machines.			Reaping-machines.	Steam-plows.	Steam-harrows.	Wheat.	Oats.	Barley.	Flour.
	Butter.	Cheese.	Steam.	Water.	Horse.							
	Pounds.	*Pounds.*							*Bushels.*	*Bushels.*	*Bushels.*	*Tons.*
Auckland	2,775,531	781,109	26	7	81	449	3	2	78,244	84,947	11,350	1,478
Taranaki	1,441,736	188,228	8	2	14	117	2	2	18,134	39,242	1,791	108
Wellington	1,813,002	411,384	35	1	45	401	3	2	115,673	228,200	10,952	357
Hawke's Bay	317,877	228,710	17	1	20	146	....	....	19,825	48,449	16,396	272
Marlborough	191,800	5,540	13	1	7	185	1	....	35,582	65,433	67,872	148
Nelson	659,699	49,393	12	3	19	216	1	1	30,474	6,318	50,418	148
Westland	88,976	....	....	....	....	3	....	....	415	3,066	450	74
Canterbury	2,298,383	1,950,688	227	6	38	3,151	10	10	1,745,917	1,957,588	261,439	1,724
Otago	2,580,725	1,084,598	211	40	188	3,219	11	3	718,384	2,281,351	99,837	2,080
Chatham Islands	3,225	....	....	....	1	3	....	....	40	180	....	1
Totals, Mar., 1886	12,170,964*	4,594,795†	559	61	413	7,890	31	20	2,752,688	4,664,689	540,500	6,340
Totals, Apr., 1881	8,453,815	3,178,694	493	68	458	6,595	29	13	4,980,188	5,386,315	1,080,010	4,965

*The statement of the annual production of butter can only be regarded as an estimate, for although the quantities given are compiled from the returns in the household schedules, yet, as the majority of small farmers do not keep an account of all butter made, their returns can not be considered to be closely accurate.

†This quantity includes 1,089,468 pounds made in cheese factories.

[From the Statist, November 5, 1887.]

COTTON MANUFACTURE IN INDIA.

A "Review of the Trade of India in 1886–'87," by Mr. J. E. O'Conor, the assistant secretary of the department of finance and commerce, which has just come to hand from Simla, is an exceedingly interesting and useful compilation, dealing minutely as it does with all branches of Indian trade, and giving, in most instances, comparative statistics for several years back to illustrate and support the conclusions drawn. The arrival of the work at the present moment, when the question of the native manufacture of cotton yarns in competition with those of Lancashire is occupying the attention of merchants in the north, and of the Manchester Chamber of Commerce in particular, is most opportune. Mr. O'Conor's report on the various branches of the cotton trade, whether on the importation into India of manufactured goods, on the reasons for the falling off of exports of raw cotton to this country, or on the remarkable growth of the export trade in native-made goods, is worthy of every consideration. Confining our attention to the cotton manufacturing industry, we find that the exports last year (twelve months ended March 31 last) of cotton yarn and cloth amounted to 46 per cent. of the gross shipments of manufactured and partly manufactured articles, and a very large proportion was in twist and yarn. As we have shown in our analyses of the monthly Indian trade returns, one of which will be found in this issue under "Government notices," the exports of cotton cloth and yarn are both expanding, but it is to other markets than China and Japan that the piece-goods are going. Native-made piece-goods do not seem to go down much in China yet. Mr. O'Conor says "that the Chinaman prefers to buy coarse strong Indian spun yarn and weave his stout durable jacket in his own hand-loom, while he already also takes a considerable quantity of raw cotton to spin and weave for himself." The exports of Indian-made piece-goods to China appear to be falling off, but increasing to other markets.

It is, however, to the exports of cotton yarn that the greatest change is taking place. We find that the shipments have increased 83 per cent. in value during the

past five years, and have more than doubled in quantity during the same period. The following are the yearly totals:

Year.	Pounds.	Value.
1882-'83	45,280,000	£1,816,000
1883-'84	49,670,000	1,926,000
1884-'85	65,890,000	2,441,000
1885-'86	78,240,000	2,755,000
1886-'87	91,600,000	3,336,000

Of the 91,750,000 pounds exported last year, China took no less than 79,250,000 pounds and Japan nearly 9,500,000 pounds, these two countries taking between them from 88,000 000 to 89,000,000 pounds. The Bombay Millowners' Association says that 1886 proved "one of the most prosperous years for spinning and weaving ever experienced since the industry fairly took root in Bombay. A brisk local demand at remunerative prices has generally prevailed for the yarns and cloths produced by the mills, and our leading foreign markets, China and Japan, have also proved better customers than in any previous year."

At a meeting of the Manchester Chamber of Commerce on Monday last, a resolution requesting the directors to inquire into the causes of the extraordinary growth of the India cotton industry was unanimously adopted. Mr. J. C. Fielden, who moved the resolution, said that in the whole history of the cotton trade, since the introduction of the spindle and the power loom, England had never been displaced before in a market where her goods went in upon equal terms with those of other nations, and the question arose: How did this happen in the case of our markets in China and Japan? He expressed a belief that the cost of transit had something to do with this displacement of Lancashire by Indian-made goods. This view is strongly supported in the official report of Mr. O'Conor referred to. Mr. O'Conor deals first with the question of the exchange, and points out that the price of Bombay twist has fallen even more than exchange and the price of English twist, and that Bombay twist is even in a worse position for competition, owing to the impossibility of making reductions in wages equal to the reductions made in Lancashire. Mr. O'Conor considers that more probable and efficient reasons for the development of the industry must be found in other circumstances. The principal of these are:

"The cotton which the Bombay mills spin is grown, so to speak, at their doors, while the same cotton has to pay freight on a transport of 7,000 miles to England and back again as twist on its way to China. Labor is cheaper in India, and some other circumstances combine to permit of the cheaper production of twist (of the coarser kind required for China) in Bombay than in Lancashire."

Until recently the heavy freights between Bombay and China are reported to have greatly tended to counteract the advantage thus derived by Bombay from difference of distance; but shippers in Bombay have within the last year or two been able to greatly reduce freights. To quote from the report:

"Up to April, 1885, the freight to China was kept by a combination of steamer companies at what is called by the Millowners' Association the 'prohibitive' rate of 15 rupees per ton, and repeated efforts failed to produce a reduction lower than 12 rupees until the Italian line stepped in and accepted freight at 8 rupees, and since then the average has been reduced to 5 rupees, or about half what shippers were prepared to pay in the first instance; and as the association says, 'the reduced prices at which Bombay manufacturers have been able to offer their productions have developed a demand for them altogether beyond the most sanguine expectations.'"

The port trust charges on cotton yarn and cloth, as well as on coal and machinery required for the mills, are also reported to have been largely reduced during the year, and to have greatly improved the power of Bombay spinners to compete with foreign producers in outside markets.

The following table gives at a glance some idea of the steady growth of the cotton manufacturing industry in India during the last ten years:

Bombay, etc., mills, spindles, and looms.				Exports from India.		
Years.	Mills.	Spindles.	Looms.	Yarns.	Piece-goods.	Value of yarns and piece-goods together.
				Pounds.	*Yards.*	
1876	47	1,100,112	9,139	7,926,000	15,544,000	£740,900
1877–'78	53	1,289,706	10,553	15,600,000	17,545,000	1,054,300
1878–'79	58	1,436,464	12,983	21,332,000	22,517,000	1,304,200
1879–'80	58	1,470,880	13,307	25,862,000	25,800,000	1,553,500
1880–'81	58	1 471,780	13,283	26,901,000	30,424,000	1,823,200
1881–'8	62	1,550,944	14,396	30,786,000	29,911,000	1,925,200
1882–'83	62	1,654,108	15,116	45,378,000	41,588,000	2,503,100
1883–'84	74	1,895,284	16,251	49,876,000	55,613,000	2,788,000
1884–'85	81	2,087,055	16,455	65,897,000	47,968,000	3,259,700
1885–'86	86	2,110,847	16,455	78,241,000	51,577,000	3,568,700
1886–'87	94	2,261,561	17,455	91,804,000	53,405,000	4,218,900

Several more mills are in course of erection, or projected, at various places in India, and it is expected that by the end of the year there will be 150,000 more spindles at work; and Mr. O'Conor makes the following remarkable statement, which must be received with something like amazement by cotton spinners in Lancashire:

"With full and free development of trade it is hardly open to doubt that the natural advantages possessed by Bombay must enable it to ultimately oust Lancashire from the China markets so far as regards twist made from Indian cotton."

The mill-owners are also reported to be pushing their trade in other directions, and satisfaction is expressed that they are fully alive to the opportunity for the extension offered by the important markets on the east coast of Africa. An agency has been opened at Aden for the collection of samples, information, etc., and the trade with the markets of that part of the globe is already acquiring respectable dimensions. The Indian trade returns for the twelve months ended March 31st last gave the shipments of cotton piece-goods to the east coast of Africa as follow:

Years.	Yards.
1884–'85	10,086,679
1885–'86	11,171,680
1886–'87	15,810,973

It will probably be news to many of our readers to learn that India exports to China more yarn than England exports to India and China together. The English trade returns gave a total export to China and India of about 57,000,000 pounds of yarn in 1886. The Indian trade returns for twelve months ended March 31 last show exports to China alone of 79,000,000 pounds. It is evidently high time for Manchester to look to her laurels. She has already lost her supremacy in many markets which were formerly exclusively her own, and India, with which China has been considered *par excellence* the market for Lancashire spinners and weavers, is now not only competing with Manchester in the far East, but is turning her attention, and with success, to Africa.

It is true the British exports of cotton piece-goods to India last year were exceedingly large; but there were special reasons which rendered the increase abnormal. Mr. O'Conor's return says that the imports of the present year already show that there is a restriction in trade which may end in a smaller import this year than last, and our own trade returns confirm it. Thus:

Exports of cotton piece-goods, Great Britain to India, nine months ended September 30.

Year.	Bombay.	Madras.	Bengal.
	Yards.	*Yards.*	*Yards.*
18 6	595,117,100	101,754 800	902,784,600
1887	457,190,000	97,081,400	792,107,600

[From the London and China Telegraph, October 22, 1887.]

THE CULTIVATION OF CINCHONA IN JAVA.

As the outcome of observations made at the meeting of the Planters' Association at Bandoeng, in Java, Mr. C. H. Von Winning makes the following important remarks in the Indische Mercuur:

Mr. Berkhoat, government forester, had asserted that profits can still be made at a sale price of the product of 5 cents per unit, and per half kilogram of bark, on condition that the cinchona trees are not rooted up before their sixth or seventh year, whilst Mr. Von Romunde, director of the government cinchona culture, ratified this assertion in so far that a well-conducted cinchona plantation may exist, and make profits, at a sale price of the bark of at least 7 cents per unit. I have greatly wondered how any one can pronounce such verdicts, which are not founded on experience, but are only results of very uncertain and very optimistic calculations for the future. Many details are required; but many are still utterly unknown, because the cultivation in Java is much too young, and especially because it has been carried on with the seriousness wholly indispensable for good and reliable statistics for a few years only. Will the soil be as proper for the culture of cinchona after twenty, thirty, or fifty years? Nobody knows. Which methods of culture and harvesting are the best? Here opinions differ greatly; for example, not long ago in the government plantations a method of culture was condemned and left after it had been extolled as the best. Ought the trees to be scraped or not? What shall be in future the middling standard of the yearly harvest of a cinchona plantation? Seedlings give the most divergent average figures. From seed of the same tree, obtained at the same time, grown on the plantations under my management, trees have bark of a half, but also of more than 10 per cent. alloy. Who can determine the future average alloy of the bark from a cinchona plantation? And this is naturally one of the most important factors of the problem. But not only the alloy of cinchona of the plantations, but also the average yearly harvest, is still music of the future. We try to learn and improve; we hope, but we do not know yet.

At the cinchona plantations under my management—one cleared for twelve, the other for ten years—from every garden-plot (five bouws) all the figures are from the beginning faithfully noted which are of worth for a statistical survey; as, for instance, number and offspring of the trees, distance of planting, manner of keeping in repair, and harvesting, quantitative and qualitative result of the harvest, analysis of bark of various ages, original and renovated, etc. From this already much has been learned and grounded thereon; several modifications have been made in the manner of cultivating and harvesting. But in the result such figures show best that a period of ten or twelve years is much too short for building precepts for future cultivation. Moreover, the useful experience for our present culture only dates from the time that the high alloy of cinchona (of the Ledgeriana) became known, and this species was increased on a large scale, and this is not much longer than twelve years ago.

However instructive the government culture may have been by the incessant and always published trials, also on technical grounds, etc., it has never—at least, so I know—yielded any precepts of commercial value. The yearly figures of productions and experience can not serve private persons. Nowadays, garden-plots are rooted up and harvested which are more than twenty years old, but a private person will never be able to afford such Christmas boxes. The harvest of the government plantations of 1885 (the last which is known) shows exactly the contrary of the value from the director of this culture—that profits are still to be made at a market price of 7 cents per unit, and per half kilogram. According to the report, the price of a half kilogram of bark amounted for the government to circa *f.* 0.375. A private person must add thereto the various taxes, the ground rent, the insurance of his buildings and harvest, and the interest of his original and working capital, which are all factors which the Government does not consider in its reports. When the government plantations had been worked by a private person a half kilogram of bark, from the harvest of 1885, would have cost him more than *f.* 0.50. Now, the average alloy of the government harvest amounted in that year to 3.15 per cent.; thus, at a unit of 7 cents, the yield per half kilogram would have been circa *f.* 0.225. At that unit the government would thus have lost nearly *f.* 0.155 on every half kilogram of bark from its harvest. And for a private person working the government plantations the loss might have amounted to at least *f.* 0.27 per half kilogram.

It is evident that at a unit of *f.* 0.5 all the bark below an alloy of 3 per cent. is absolutely valueless. Harvesting, shipping, and selling it at such a unit only results in loss. Actually, the average alloy of the harvest of most cinchona plantations amounts to little more than 3 per cent. It is hoped that this will improve. I also

hope and believe it, but a plantation of moderate extension must be tolerably old, that is to say, must have passed several years of full production. Before it yields, for instance, constantly 100,000 half kilograms of bark, of an average of 5 per cent. cinchona, rather a long period of years must have elapsed.

Such a production, at a unit of *f.* 0.05, should yield *f.* 25,000, to be diminished with 100,000 times *f.* 0.13 or *f.* 0.15—*f.* 13,000 or *f.* 15,000—for costs of harvesting till the sale of the bark and the receipts of the profit on the plantations. The remainder thus would amount to *f.* 10,000 or *f.* 12,000, out of which must be defrayed (1st) all the charges and expenses, those for harvesting excepted, and consequently the restoring of buildings, the costs of keeping in repair thereof, and of the gardens; the costs of new plantations, to fill the place of the rooted up trees which have yielded the harvest, the salaries of the managing body of assistants, the costs of survey, etc.; (2d) the interest of the original and working capital; (3d) the amortization of this capital, or the deduction on the value of the plantation, because it is unknown how long the soil will remain fertile for cinchona culture, and because the right of quit rent ends after expiration of the period for which it has been conferred.

From the experience gained by me in twelve years of cinchona culture, and of my knowledge of this culture, I dare to predict that when the unit per half kilogram is permanently no higher than 5 or even 7 cents, by far the greatest number of the cinchona plantations in Java must be ruined sooner or later. I have thought that a protest against the verdicts of both the gentlemen named in the beginning of this paper might be useful to prevent great disappointment to young planters, and by those who might wish to begin cinchona plantations, or to advance funds on them.

New Process of Producing Iron and Steel.—Acting Consul Hornstedt, of Moscow, under date of October 10, 1887, sends the following:

I submit to your notice a very important invention, recently patented by a Russian subject and successfully worked in this country.

The invention consists of a method to produce iron and steel direct from the ore. The whole secret of the process is the construction of the furnace, which is simple and inexpensive. It will be difficult for our ironmasters to believe that under the new process iron ore, after submitting it to the ordinary smelting process, is taken direct from the furnace to the rolling-mill and turned into sheet-iron; yet such is the case, there being, to my certain knowledge, three furnaces in this country now in full operation and working with great success. There can be but little doubt that this new invention will create a perfect revolution in the manufacture of charcoal iron. Whether the process can be used with equal advantage where coke is the fuel, I can not positively assert, as the furnaces I refer to are worked with charcoal. I am, however, assured that an experiment made with coke was crowned with equal success.

Spanish Spirit Market.—Under date of 19th October, Consul Ingraham, of Cadiz, sends the following translation of a dispatch sent by the Danish consul to his Government and furnished by him to Consul Ingraham:

[Translation.]

The Spanish spirit market has, during this year, undergone a considerable crisis. The wine exportation to France last spring was proportionally small, on account of a large stock on hand which remained over last year, and this, combined with good prospects for an abundant wine crop, had a depressing effect on the trade and caused many catastrophes.

The spirit consumption suffered consequently under these circumstances. The German spirit octroi projects were carried through in the month of July, which shortly afterwards caused a tax on the spirit of 30 marks per 100 liters. The definite tax of 70 marks will first come into force on the 1st of October, this year.

This had scarcely happened in Berlin before France also raised the duty on German spirit about 30 marks, which in one respect was strange, because 30 marks are allowed in form of drawback.

Spanish newspapers, without regard to politics, demanded a protective duty on spirits; and the whole was treated as a matter of national interest, but nobody had any idea as to what the German spirit laws actually were. People thought that all spirits not produced from grapes were amilico, and consequently dangerous for the health. It was at last proved that into some places (Tarragona, for instance) more spirits were imported from Sweden than from Germany, and that all spirits were not amilico. The patriotic zeal has decreased a little, but there is still excitement among the people against everything which is called industrial spirits. In many

places in the interior of the country (for instance, Villaviciosa and Cabra, in the province of Cordoba) the local authorities have prohibited importation of industrial spirits. This is of course illegal, but is nevertheless done.

Importations of sugar molasses from Cuba, from which spirits are manufactured at very low prices, have also commenced. People think it is grape spirit because it is manufactured here, and employ it for many purposes.

The result of the above is that Spain, during the past six months, only imported two-thirds of what was imported during the same time last year, and the ensuing six months will not be much better.

Spain has not sufficient resources to supply its own spirit consumption with its own manufactures.

The total spirit importation last year was 1,020,595 hectoliters.

Value	pesetas..	61,235,700
Duty	do....	17,808,932

If the Government continues to protect the inland spirit manufacture, and France does not change its present position respecting the spirits of German manufacture, the consumption will gradually decrease; but whether the commercial treaty with Germany, which will expire 1892, is renewed or not, Spain will most likely continue to import spirits for many years, but only on a small scale.

Tariff Act of Bermuda.—Commercial Agent Doty, of Saint George's, transmits the following:

THE SUPPLY AND APPROPRIATION ACT, 1887-'88.

Import duties from July 1, 1887, to June 30, 1888.

1. There shall be raised, levied, collected, and paid the several duties as the same are respectively set forth in the table of duties hereinafter contained upon goods, wares, and merchandise imported and brought into these islands, or taken out of any bonded warehouse in these islands, on, from, and after the first day of July in this present year, until the thirtieth day of June, inclusive, which will be in the year of our Lord one thousand eight hundred and eighty-eight, the said duties to be paid by the importer or consignee thereof to the receiver-general or other proper officer of revenue, at the office of the public treasury in these islands, to the use of your Majesty, your heirs and successors, for and towards the support of the government of these islands, to be applied to such objects as have been or shall be authorized by the legislature of these islands; that is to say:

TABLE OF DUTIES.

		Specific duties.
Arrowroot, unmanufactured	per 100 pounds..	£0 10s. 0d.
Arrowroot, manufactured	per pound..	0 0 6
Alcohol, arrack, brandy	per gallon..	0 4 0
Cordials, gin, peppermint water, shrub, whisky	do....	0 4 0
Rum	do....	0 4 0
Wine of all kinds (20 per centum ad valorem)	per hogshead..	1 0 0
Malt liquor, cider, and perry (in bottles, commonly called quart bottles)	per dozen..	0 1 0
Cigars	per thousand	0 10 0
	or the pound, at the option of the importer..	0 1 0
Tobacco (other than cigars) and snuff	per pound..	0 0 2
Cows, calves, heifers, and oxen	per head..	0 4 0
Beef, in fore and hind quarters, when landed in whole quarters and not subdivided	per quarter..	0 1 0

Proviso.

And in all cases where such duties are imposed according to any specific quantity the same shall be deemed to apply in the same proportion to any greater or less quantity.

Irrespective of the foregoing duty on spirits there shall be levied and paid into the public treasury on each and every cask or other package landed within these islands containing alcohol, arrack, brandy, cordials, gin, peppermint water, rum, shrub, or whisky, in bulk, on the landing thereof in these islands, the sum of six pence, and

on the spirits herein enumerated no drawback of the tax hereby imposed on the package shall be allowed.

Ad valorem duties.

On all goods imported, except articles subject to specific duties, and those enumerated in the following table of exemptions, and such books as, under the act entitled "An act to regulate the importation of books and to protect the British author," are subject to an import duty of 15 per centum—5 per centum ad valorem.

TABLE OF EXEMPTIONS.

Exemptions.

Animals and goods imported on account of the public of these islands by any public officer or committee, being the property of the public or purchased at the public expense.

Baggage, consisting of apparel and professional apparatus of passengers.

Books, not reprints of British publications.

Bullion, coals, coin, diamonds.

Fresh fruit and fresh vegetables, excepting potatoes.

Horses and other beasts and provisions and stores of every description, imported for the use of her Majesty's land and sea forces, or of the convict establishment, in the event of convicts being hereafter transported to these islands, being the property of her Majesty, on satisfactory proof of their being the property of her Majesty, and horses of military officers brought into these islands as a necessary part of their military equipment, subject to all conditions, provisions, and regulations contained in any act passed or to be passed by the legislature of these islands: *Provided*, That no military officer during the whole term of his service in these islands shall be allowed to import free of import duty more horses than shall be shown by the certificate of the officer commanding her Majesty's troops or other proper officer to be required by such officer importing such horses under her Majesty's military regulations as a necessary part of his military equipment.

Ice.

Paintings, engravings, photographs, and sculpture (whether monumental or otherwise).

Personal effects of inhabitants of these islands dying abroad and not intended for sale.

Specimens of natural history.

Trees, plants, and shrubs for planting.

Uniforms, naval and military; that is to say, the special dress of naval and military officers indicating their rank and profession and by which they are distinguished from civilians, including the necessary arms, badges, decorations, and ornaments proper thereto and imported by naval or military officers for their own personal use.

Immigrant laborers in Hawaii.—Minister Merrill, under date of October 15, 1887, transmits the following report of the inspector-general of immigration on employment of immigrant labor upon plantations in Hawaii:

Number and nationality of employés.

Description.	Men.	Women.	Minors.	Total.
Hawaiian	1,690	3	14	1,707
Portuguese	2 550	518	410	3,478
Japanese	1,985	175	.....	2,160
Chinese	5,099	.....	.....	5,099
South Sea islanders	242	.....	.....	242
New Hebrideans	148	10	.....	158
Other nationalities: Americans, English, Finns, Germans, Malays, etc	.....	.....	.....	678
(Total	.....	.....	.....	13,517

The following question was asked the manager of each of the plantations I visited, viz: Which nationality of immigrants do you prefer? To which replies were made as follows:

Twenty-three prefer Japanese.
Twelve prefer Portuguese.
Eleven prefer Chinese.
Eleven prefer Chinese and Portuguese.
Two prefer Japanese and Portuguese.

The Japanese are evidently growing in favor, for general work, with the planters. Where they have been tried they have proved themselves equal to, if not superior to, the Chinese in the boiling-house. On the Lihue plantation, Kauai, none but Japanese are employed in the boiling-house, and Mr. Carl Isenberg (the manager) speaks in the highest terms of their work. The same testimony was given by other managers who employ Japanese round the mill and in the boiling-house.

The general opinion is that the Japanese are the best class of immigrant laborers and next to them the Portuguese.

For working mules and oxen, plowing and teaming, Hawaiians and Portuguese are preferable.

Although among them there are many good men and good workmen, the general impression is there are enough Chinese in the country.

The South Sea Islanders were introduced into the country for two purposes—the one to meet an urgent demand for laborers, and the other to increase the population (hoouluiahui). It was hoped they would intermarry with the Hawaiians, and by an infusion of new blood renew the vitality of the latter race; but as the South Sea Islander is undoubtedly inferior to the Hawaiian both physically and mentally, intermarriage could only end detrimentally to the Hawaiian. The Hawaiian feels and knows that he is superior to the South Sea Islander, and therefore will never fraternize with him, and a Hawaiian woman would as soon think of entering into marital relations with "the man in the moon" as with a South Sea Islander. As laborers, with a few exceptions, they are an absolute failure. They have been a source of great expense and trouble to the Government and no benefit to the country, and, all things considered, I think they are a very undesirable class of immigrants.

The health of the laborers throughout the Kingdom is, I am happy to say, good. beri-beri, which in former years was so prevalent and fatal among the Chinese and Japanese, is nearly eradicated, there being on all the plantations not one-half so many cases as I have known, in former times, on a single plantation. The comparative freedom from this dreaded disease I ascribe to better diet and medical attendance.

The laborers' quarters are, generally speaking, good. There are, however, a few exceptions. I have ordered improvements where they were necessary.

The managers of the different plantations I have visited showed a ready willingness to make any improvements I saw fit to suggest.

Hawaiian exports.—Minister Merrill transmits the following table:

Showing the domestic exports of the Hawaiian Islands during nine months, 1887, *compared with nine months*, 1886.

Articles.	1887.	1886.	Increase.	Decrease.
Sugar.....pounds..	197,469,126	202,468,051	.....	4,998,925
Rice.....do....	10,446,000	5,401,715	5,044,285	.....
Hides.....pieces..	21,882	22,232	.....	350
Bananas.....bunches..	45,052	35,102	9,950	.....
Goat-skins.....pieces..	12,222	14,483	.....	2,261
Molasses.....gallons..	63,430	63,071	359	.....
Sheep-skins.....pieces..	5,146	7,360	.....	2,214
Coffee.....pounds..	4,900	4,631	269	.....
Betel leaves.....boxes..	671	223	448	.....
Wool.....pounds..	75,911	73,180	2,731	.....
Awa.....do....	9,686	865	8,771	.....
Tallow.....do....	20,895	15,885	5,010	.....
Beef.....do....	1,840	.....	1,840	.....

Indian corn crop of Italy.—Consul-General Alden, under date of October 13, 1887, says:

From telegrams to the ministry of agriculture, commerce, and industry it appears that the Indian corn crop of this year in Italy has been about 89.45 per cent. of the average crop. Of this four-fifths are "good," one-tenth "excellent," and one-tenth "middling." In northern and central Italy the crop was of average quality, but the crop in southern Italy and Sicily was short.

Foreign commerce of Italy in Indian corn during the eight months ending August 31, 1887, compared with the corresponding period of 1886.

First eight months of—	Imports.	Exports.
	Tons.	*Tons.*
1887	22,204	7,628
1886	26,611	6,148

Rice crop of Italy.—Consul-General Alden, under date of 18th October, transmits the following:

I have learned from official sources that rice crop just harvested in Italy is about 18,942,315 bushels, being about 91 per cent. of the average crop. Of this four-fifths are good quality and one-fifth is middling.

Invention for keeping milk fresh.—Under date of 31st October Consul Gade, of Christiania, sends the following:

There has been discovered a new, simple, and cheap ingredient, which neither changes the taste of the milk, nor is inimical to health, for conserving milk in a fresh condition for months without being hermetically sealed. Mr. M. E. Meyer, of Christiania, is the inventor.

Ceará sugar industry.—Under dates of September 2 and October 14, 1887, Consular Agent Studart submits the following statistics of the sugar industry of Ceará:

Sugar production.

Year.	Quantity.	Value.
	Pounds.	
1882-'83	6,066,292	$151,070
1883-'84	7,001,757	169,924
1884-'85	2,227,712	52,481
1885-'86	2,257,258	94,349
1886-'87	2,359,130	41,243

Local taxes.—There are no local taxes, but there is a provincial tax on machinery for making sugar.

Duties.—The export duty is 9 per cent.—4 being provincial and 5 general—ad valorem.

The import duty is 240 reis per kilogram and 48 per cent. additional.

Export of sugar from Ceará.

Whither exported.	1882–'83.	1883–'84.	1884–'85.	1885–'86.	1886–'87.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
United States	163,170	441,410	41,454	279,123	168,224
United Kingdom	5,679,756	5,947,357	1,794,209	1,978,105	2,162,827
France	108,045	145,089	392,049	.....	.....
Mediterranean ports	.....	100,548	.....	.....	.....
Channel Islands	.....	367,353	.....	.....	.....
Canada	115,321	.....	.....	.....	.....
Brazilian ports	.....	.....	.....	.....	27,081
Total quantities	6,066,292	7,001,757	2,227,712	2,257,258	2,358,732
	Dollars.	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
United States	4,547	10,052	1,024	4,817	6,094
United Kingdom	140,527	142,687	45,581	89,532	32,975
France	2,713	4,531	5,824	.....	.....
Mediterranean ports	.....	2,733	.....	.....	.....
Channel Islands	.....	9,021	.....	.....	.....
Canada	3,283	.....	.....	.....	.....
Brazilian ports	.....	.....	.....	.....	2,174
Total value	151,070	169,924	52,431	94,349	41,243

Tobacco monopoly in Spain.—Consul Horatio J. Sprague, of Gibraltar, writes to the Department as follows:

The Spanish Government has recently farmed out the tobacco monopoly in Spain to its national bank, under heavy cash advances, and it is supposed foreign capitalists are also interested in this important financial operation.

As its favorable issue must naturally depend much upon the manner in which the whole enterprise is conducted, it is supposed that there will be many important changes regarding the measures to be taken with the view of diminishing the contraband trade in tobacco, which has existed from time immemorial, and which traffic is so closely identified with the interests of the Spanish populations in proximity to this fortress.

I am inclined to believe that this farming out of the tobacco monopoly in Spain will ultimately have a very prejudicial influence over the general trade of Gibraltar so soon as the Bank of Spain commences operations.

Increased destitution among the needy and working classes must follow in Andalusia and other provinces on the sea-coast before they become accustomed to this new régime of affairs. It may, however, ultimately have some salutary effect upon the morals of a certain class of people, by discouraging numerous abuses that are supposed to be constantly occurring through the many temptations which the contraband trade offers to those upon whom the duty devolves of protecting the Spanish exchequer from frauds and peculations, which are supposed to have even entered the ranks of a certain portion of the Spanish army, which can not but prove demoralizing to whatever appertains to military discipline.

Declared exports from Austria-Hungary.—Under date of October 19, 1887, Consul-General Jussen transmits the following:

Statement showing the value of declared exports from the consular districts of Austria-Hungary (agencies included, to the United States of America during the quarter ending September 30, 1887.

Articles.	Buda-Pesth.	Prague.	Reichenberg.	Trieste.	Vienna.	Total.
Amber, crude					$4,591.90	$4,591.90
Argols				$456.26		456.26
Art, works of					10,407.55	10,407.55
Beer		$6,988.10				6,988.10
Bed-feathers		1,680.85				1,680.85
Books and paper	$270.68	3,986.98	$419.85		1,766.54	6,444.05
Black lead		4,793.82				4,793.82
Beans and lentils	17,006.74			14,066.00	4,206.69	35,279.52
Buttons		34,077.04	31,108.43		269,419.05	334,604.52
Brushes					1,477.94	1,477.94
Carriages					599.85	599.85
China-headed nails			487.70			487.70
Cloth and woolen goods		22,757.40	10,904.68		19,050.03	52,712.11
Cuttle-bones				1,681.02		1,681.02
Cutlery		3,884.63				3,884.63
Drugs and chemicals		3,123.10		10,797.14		13,920.24
Embroideries and chenilles		7,098.20			7,640.02	14,738.22
Egg-yelk					2,429.55	2,429.55
Fancy goods and jewelry		24,982.66	*23,830.35		150,645.42	199,458.43
Fans					38,360.87	38,360.87
Fruits, dried	4,809.11	1,790.27		176,659.84		183,259.22
Furniture		1,352.98		43.00	24,732.20	26,128.18
Glassware	6,810.08	342,168.70	119,311.42		17,501.47	485,791.67
Gloves		54,947.89			13,744.95	68,692.84
Graphite					3,504.16	3,504.16
Gum				24,383.12	7,182.80	31,565.92
Hair		5,102.69			7,192.97	12,295.66
Herbs and roots	1,389.14			9,893.62		11,282.76
Hops		9,837.59			165.79	10,003.38
Insect-powder and flowers				24,709.24		24,709.24
Leather and skins	2,301.05	7,378.04		28,013.40	9,328.53	47,021.02
Lighting fluid					15,952.07	15,952.07
Linen and cotton goods		5,345.50	789.80		265,886.92	272,022.22
Maccaroni				1,640.46		1,640.46
Machinery					2,304.83	2,304.83
Meerschaum, crude					8,704.80	8,704.80
Metal goods			2,796.63		3,522.29	6,318.92
Mineral water	16,724.80	14,497.64			294.12	31,516.56
Musical instruments		2,188.02			1,516.92	3,704.94
Oils	799.00			4,327.70		5,126.70
Ozokerite and glycerine					12,637.37	12,637.37
Porcelain and pottery	4,269.21	170,452.38	5,745.87		6,914.72	187,382.18
Rags				8,238.82		8,238.82
Sardines				6,047.58		6,047.58
Seeds	619.61			5,975.80		6,595.41
Sewing-machines					405.26	405.26
Silks and velvets		70,779.83			37,513.45	108,293.28
Smokers' articles					29,695.92	29,695.92
Sponges				4,017.70		4,017.70
Stage decorations					1,471.16	1,471.16
Tartar, crude	13,608.80				144,940.37	158,549.17
Toys		3,201.57				3,201.57
White lead				1,933.04		1,933.04
Wines and liquors	24,175.60				4,978.65	29,154.25
Wood-pulp		7,453.08			9,365.27	16,818.30
Wool				680.96	3,488.27	4,169.23
Miscellaneous	472.61	3,295.75	225.91	2,850.11	1,954.76	8,799.14
Total value	93,256.43	813,159.66	195,620.64	326,408.90	1,145,585.43	2,574,031.06
Total for same quarter in 1886	55,684.29	772,588.81	216,663.96	254,097.55	964,795.86	2,263,830.47
Increase	37,572.14	40,570.85		72,311.35	180,789.57	310,200.59
Decrease			21,043.32			

NOTE.—The average value of the Austrian paper florin during the quarter was 38.75 cents at Buda-Pesth, 38.70 cents at Prague, 38.70 cents at Reichenberg, 38.73 cents at Trieste, and 38.70 cents at Vienna.

Exports from Dublin to the United States.—Consul McCaskill transmits the following:

Statement showing the declared exports from Dublin to the United States for the year ending September 30, 1887.

Articles.	December 31, 1886.	March 31, 1887.	June 30, 1887..	September 30, 1887.	Total for year.
Stout and ale	$256,300.50	$155,903.86	$133,916.10	$158,324.90	$704,405.36
Whisky	14,005.60	4,604.20	2,299.15	9,355.54	30,264.49
Woolen goods	7,870.80	11,995.60	26,601.88	17,259.86	63,727.64
Salted skins	30,175.00	20,050.20	27,883.56	26,173.90	104,282.66
Oatmeal	10,300.25	20,873.10	10,061.90	14,046.60	55,282.85
Glue	11,100.60	15,150.80	11,379.26	9,892.10	47,522.76
Feathers	2,690.00	3,826.00	1,882.82	3,743.60	12,142.42
Paper-stock	1,071.65	1,648.75	1,474.00	.....	4,194.40
Hosiery	265.90	.....	755.30	1,585.24	2,606.44
Books	920.60	.....	1,625.50	329.07	2,875.17
Prune wine	3,469.80	5,950.80	3,769.50	9,901.70	23,091.80
Aerated waters	2,980.75	2,705.80	26,352.88	14,158.60	46,258.05
Carriages (Irish jaunting-cars)	865.30	449.70	.....	.....	1,315.00
Saddlery	.....	.....	.....	.....	.....
Roasted maize	465.18	870.60	241.00	294.42	1,871.20
Fertilizers	11,200.62	.....	.....	10,328.50	21,524.12
Iron-frame works	.....	.....	.....	.....	.....
Stone	.....	2,150.70	.....	.....	2,150.70
Miscellaneous	1,306.00	1,761.43	1,074.18	3,475.46	7,617.07
Total	354,988.05	247,501.54	249,267.03	278,859.49	1,130,616.11
Total for preceding year	208,347.22	264,253.80	253,354.00	246,449.85	1,082,404.87
Increase	86,640.83	.....	.....	32,409.64	98,211.24
Decrease	.....	16,752.26	4,086.97	.....	.....

Exports from Nottingham to the United States.—Commercial Agent Williams transmits the following table:

Statement showing the declared exports between the consular district of Nottingham and the United States for the year ending September 30, 1887.

Articles.	Quarter ending—				Total for the year.
	December 31, 1886.	March 31, 1887.	June 30. 1887.	September 30, 1887.	
Carpets	.....	.....	$4,586.77	$4,687.00	$9,273.77
Cotton goods, etc	$39,515.59	$15,842.02	8,902.26	25,320.01	89,579.88
Drugs, paints, etc	18,303.41	29,008.56	25,384.20	24,556.36	97,247.53
Elastic goods	38,231.82	36,070.39	27,881.86	37,112.96	139,297.03
Hides	180,684.87	153,067.72	108,669.62	161,219.72	603,641.93
Hosiery	234,581.29	343,121.58	188,795.48	677,231.15	1,438,729.50
Lace	683,450.35	989,628.79	568,012.85	765,606.38	3,006,698.37
Leather	38,546.61	19,077.14	24,190.49	30,096.52	111,910.76
Linens	28,649.98	46,438.81	33,865.02	64,072.36	173,026.17
Machinery	13,786.79	23,645.47	15,662.69	16,449.18	69,544.13
Porcelain and stoneware	4,821.81	3,323.70	5,368.64	9,151.96	22,666.11
Silk goods	3,512.11	17,064.05	5,235.34	12,011.49	37,822.99
Wines, beer, etc	157.51	.....	.....	.....	157.51
Woolen goods	.....	1,965.66	.....	38,820.39	40,786.05
Sundries	6,431.50	4,868.89	5,494.70	4,873.88	21,668.97
Total	1,290,673.64	1,683,117.78	1,017,049.92	1,871,209.36	5,862,050.70
Total for year ending September 30, 1886	1,301,196.68	1,742,190.78	1,056,061.93	1,681,906.45	5,781,355.84
Increase	.....	.....	.....	.....	130,694.86

Exports from Frankfort-on-the-Main.—Consul-General Mueller, under date of September 30, 1887, transmits the following statement of exports to the United States, from the district of the United States

consulate-general at Frankfort-on-the-Main and the consulates subordinate thereto, during the year ended September 30, 1887:

Articles.	Aix-la-Chapelle.	Barmen.	Cologne.	Crefeld.	Dusseldorf.
Braids, bindings, and trimmings, etc		$1,143,642.09			$17,320.45
Books, stationery, photographs, and paper ware	$58,745.05		$20,151.73	$53,925.87	
Buttons and button stuffs, etc	343.91	367,540.64		2,390.82	22,664.54
Caps and cartridges					16,071.25
China, glass, porcelain, stone, and earthen ware			50,382.89		107,100.82
Cloth	1,182,492.79				18,911.05
Cologne water			23,986.31		
Dyes, drugs, chemicals, etc	45,098.01	256,085.36	288,801.19	15,670.43	91,783.46
Fancy goods and toys		311,533.11			
Glass-plate, window and mirror glass	98,993.37		4,913.66		
Gloves	217,218.65				
Hat-bands and ribbons		796,468.71	1,087.03	17,077.03	
Hops			11,482.99		
Iron ware, steel, cutlery, etc	1,805.63	1,138,639.88	958,105.91		3,745,025.60
Lead and spelter	21,152.91				
Leather, hides, and skins			154,224.63		
Linen, woolen, and cotton goods	353.95	1,095,805.96	47,708.41	200,012.82	238,401.02
Machinery	17,222.33	55,018.20	9,890.12	10,328.86	42,744.14
Mineral water	4,954.36		369,629.30		4,157.37
Oil and glass paintings and chromos				4,285.58	24,493.48
Prunes, dried fruits, nuts, land produce, etc		40,906.87	8,306.91		
Pins and needles	42,673.54				
Silk, silk goods, velvets, ribbons, and braids, etc		334,771.06	478,888.71	5,676,276.81	158,575.42
Smokers' articles, snuff, cigars, and tobacco			7,849.68		
Soaps and perfumery			11,964.73		
Sundries	7,981.33	43,795.67	42,940.76	18,314.91	22,595.71
Steel (manufactured) and Bessemer	838,110.44		468,331.59		
Wine, brandy, beer, and liquor	981.35		141,178.21	22,977.79	1,916.78
Total	2,583,072.52	5,583,707.50	3,099,169.96	6,021,200.92	4,566,761.09
Total for preceding year	1,788,035.27	4,502,562.72	2,398,721.64	4,031,209.25	2,629,299.61
Increase	750,037.35	1,081,144.78	700,448.32	1,989,991.67	1,937,461.48

Articles.	Elberfeld.	Frankfort.	Kehl.	Mannheim.	Mayence.
Braids, bindings, and trimmings, etc	$35,717.36				
Brushes and hair pencils		$1,889.17		$54.74	
Bronze powder and leaf metal			$1,156.05		
Books, stationery, photographs, and paper ware		128,036.44	86,074.25	11,158.84	
Buttons and button stuffs, etc	63,255.17	70,268.11			
Clay		77,583.35			
China, glass, porcelain, stone, and earthen ware		8,959.29	74,618.80	2,041.08	
Cotton dress goods, velvets, and furnishings				10,397.27	
Cloth		38,887.82			
Downs and feathers		29,257.50			
Dyes, drugs, chemicals, etc	310,367.76	888,005.76	122,558.90	433,216.41	$395,346.53
Fancy goods and toys		49,673.18			
Fancy paper		5,062.83			
Glass-plate, window, and mirror glass		18,573.99		44,075.14	
Hatters' fur		183,578.90			
Hat-bands and ribbons	116,510.45				
Hair, prepared and raw		64,063.26	9,902.50		5,417.08
Hares' hair		272,948.08			
Hops		110,839.01	31,663.05		231,682.59
Instruments		24,973.88			
Iron ware, steel, cutlery, etc	793,352.16	28,799.50	1,901.50		
Jewelry and precious stones		18,050.00		5,187.45	223,941.32
Leather, hides, and skins		415,522.24	133,087.80	380,343.99	139,919.62
Leather goods		61,050.11			
Linen, woolen, and cotton goods	355,527.97	58,079.15	214,515.85	15,467.85	1,766.49
Machinery		11,811.11		16,717.42	
Mineral water		87,704.48		71.64	
Music, musical strings and instruments		5,804.07	3,506.40	2,510.90	1,431.65
Optical goods		10,493.82			
Oil and glass paintings and chromos		7,744.27			3,469.08
Platina ware and platinum		57,774.62			
Prunes, dried fruits, nuts, land produce, etc		257,573.05	2,223.25	133,404.04	10,916.63
Seeds, plants, etc		24,572.59			1,003.26
Silk, silk goods, velvets, ribbons, and braids, etc	740,168.06	4,980.84	241,935.50	2,099.87	
Smokers' articles, snuff, cigars, and tobacco		16,772.08	7,208.15	6,975.78	10,255.35

Articles.	Elberfeld.	Frankfort.	Kehl.	Mannheim.	Mayence.
Soaps and perfumery	.....	$11,472.22	.....	.....	.....
Sundries	$30,555.18	28,890.07	$35,887.30	$108,858.79	$29,434.57
Steel (manufactured) and Bessemer	.....	3,961.28	293,523.65	.....	.....
Wine, brandy, beer, and liquor	.....	97,276.77	5,160.35	222,091.36	687,836.18
Watches, clock, sand watchmen's detectors	.....	.....	6,721.05	595.24	.....
Total	2,445,454.06	3,164,842.79	1,271,659.35	1,400,267.81	1,742,420.29
Total for preceding year	2,203,493.43	3,276,308.52	1,042,365.60	1,501,050.77	1,530,871.98
Increase	241,960.63	.....	229,293.75	.....	211,548.31
Decrease	.....	111,465.73	.....	100,762.96	.....

Articles.	Munich.	Nurem berg.	Sonneberg.	Stuttgart.	Total.
Braids, bindings, and trimmings, etc	.....	.....	.....	.....	$1,196,679.90
Baskets and basket ware	.....	$216,674.24	$14,853.16	.....	231,527.40
Brushes and hair pencils	.....	32,546.54	.....	.....	84,490.45
Bronze powder and leaf metal	$8,866.57	614,075.37	.....	.....	624,097.99
Books, stationery, photographs, and paper ware	40,289.80	108,441.54	43,859.38	$21,189.06	566,871.96
Buttons and button stuffs, etc	.....	.....	.....	.....	526,463.19
Caps and cartridges	.....	.....	.....	.....	16,071.25
Clay	.....	.....	.....	.....	77,588.35
China, glass, porcelain, stone, and earthen ware	7,215.36	49,152.57	852,197.72	.....	1,151,618.53
Cotton dress goods, velvets, and furnishings	.....	.....	.....	.....	10,397.27
Corsets	.....	.....	.....	568,556.01	568,556.01
Cloth	.....	.....	.....	.....	1,235,241.66
Cologne water	.....	.....	.....	.....	23,936.31
Downs and feathers	.....	.....	.....	.....	28,257.50
Decalcomania	.....	47,516.83	.....	.....	47,516.83
Dyes, drugs, chemicals, etc	12,226.47	76,003.50	93,008.82	845,627.32	3,873,854.91
Fancy goods and toys	.....	408,493.91	1,076,962.12	4,185.12	1,845,847.44
Fancy paper	.....	.....	.....	.....	5,062.83
Glass-plate, window, and mirror glass	.....	1,772,299.01	.....	.....	1,998,855.17
Gold, silver, and metal paper	61,633.37	.....	.....	.....	61,633.37
Gas-burners, lava gas-tips, brass lamps	.....	26,182.97	.....	.....	26,182.97
Gloves	77,521.65	.....	14,051.34	.....	308,791.64
Hatters' fur	.....	.....	.....	.....	183,578.90
Hat-bands and ribbons	.....	.....	.....	.....	931,093.22
Hair, prepared and raw	.....	.....	.....	.....	79,402.84
Hares' hair	.....	.....	.....	.....	272,948.03
Hops	.....	2,000,850.80	.....	.....	2,386,538.44
Instruments	.....	30,281.34	.....	19,559.85	74,815.07
Iron ware, steel, cutlery, etc	.....	.....	25,288.04	.....	6,687,918.17
Jewelry and precious stones	.....	.....	.....	16,966.23	264,145.00
Lead and spelter	.....	.....	.....	.....	21,152.91
Leather, hides, and skins	.....	.....	.....	2,980.21	1,226,028.69
Leather goods	.....	.....	.....	.....	61,050.11
Leonic ware	.....	59,008.84	.....	.....	58,008.84
Linen, woolen, and cotton goods	15,226.53	26,273.05	457,514.49	494,782.73	3,270,961.27
Lithographic stones and materials	10,553.21	45,867.95	.....	.....	56,421.16
Machinery	.....	.....	.....	.....	163,232.18
Mineral water	.....	.....	7,052.26	.....	478,569.41
Music, musical strings, and instruments	.....	25,585.48	1,958.43	69,479.05	110,275.96
Optical goods	.....	19,262.24	.....	.....	29,756.06
Oil and glass paintings and chromos	247,094.01	.....	.....	.....	287,066.42
Platina wire and platinum	.....	.....	.....	.....	57,774.02
Prunes, dried fruits, nuts, and produce, etc.	7,992.58	.....	.....	280,800.33	697,123.66
Pins and needles	.....	.....	.....	.....	42,673.54
Seeds, plants, etc	.....	.....	58,280.57	.....	83,865.42
Slates and slate pencils, lead pencils	.....	147,694.17	45,088.67	.....	192,732.84
Silk, silk goods, velvets, ribbons, and braids, etc	.....	.....	.....	.....	7,637,696.27
Smokers' articles, snuff, cigars, and tobacco	.....	.....	11,295.08	.....	60,356.12
Soaps and perfumery	.....	.....	.....	.....	23,436.95
Statuary and sculpture	39,523.15	.....	.....	.....	39,523.15
Sundries	96,198.02	30,967.60	12,642.55	66,961.11	575,963.52
Steel (manufactured) and Bessemer	.....	.....	.....	.....	1,608,926.96
Wine, brandy, beer, and liquor	7,824.14	40,253.04	10,841.95	4,415.17	1,242,708.04
Watches, clocks, and watchmen's detectors	.....	.....	.....	3,564.00	10,880.29
Total	632,164.86	5,772,425.99	2,724,918.58	2,349,016.19	43,307,157.01
Total for preceding year	518,015.77	4,257,644.90	2,447,418.75	1,411,791.55	33,533,844.76
Increase	114,149.09	1,514,781.09	277,499.83	937,224.64	9,773,312.25
Decrease	.....	.....	.....	.....	.....

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REPORTS

FROM THE

CONSULS OF THE UNITED STATES.

No. 89.—FEBRUARY, 1888.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1888.

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CONSULAR REPORTS

ON

COMMERCE, MANUFACTURES, ETC.

No. 89.—FEBRUARY, 1888.

FACTORY OPERATIVES IN GERMANY.

REPORT OF COMMERCIAL AGENT SMITH.

A condensation of the official reports of the factory inspectors of the German Empire for the year 1886 has just been published by the Government at Berlin, and as it appears to me that there is much material contained in the work which might be of interest to the Department and worthy of publication in the consular reports, I have the honor to herewith communicate to you an abstract of the same. The results of the labors of the factory inspectors during each calendar year are annually laid before the Bundesrath and Reichstag. In former years all the reports were printed in full, making a bulky volume of about 1,000 pages; but last year a new departure was made, and a condensed volume of only one-quarter of this size given out, and this year the compression has been carried still further, and a book of but 160 pages been published. The pruning-knife has been well applied, and advantageously, I think, for there is much detail matter in the full reports that can be very well left unprinted; but some of the newspapers of the Empire object to the reports being made public in a condensed form, on the ground that the Government can withhold or modify statements made that may be unfavorable to some social, political, or economical policy that it may be pursuing.

The work which the inspectors are supposed to perform is too large a one for thorough execution. The population of the German Empire at the last census, taken in 1885, was 45,000,000, in round numbers. For this large number of people there are only 50 factory inspectors, with some assistants. They are expected to visit and inspect all the factories of the Empire, and see that all the regulations of the Government respecting factories in their relation to factory operatives are duly observed. They can not do this completely, but they can get somewhat of an idea of the manner in which the factories are conducted, of the general condition of the working people, and of the state of trade, and cause many abuses to be checked and removed, or avoided. That there are any factory inspectors at all, shows that the Government is desirous of guarding the interests of the working people in some measure.

Regarding the actual number of factories visited and investigated by the inspectors all over the Empire the statistics are not given. The greatest number of inspections are said to have taken place in the Kingdom of Saxony, where in the Dresden district 1,182 establishments were looked into, 64 of them more than once, and in the Chemnitz district 1,146, of which 162 were visited more than once. In the Zwickau district, in the same Kingdom, 1,123 factories were examined, of which 32 were inspected more than once. Saxony is divided up into seven inspection districts.

Next to these Saxon districts the largest number of inspections were made in the district around Arnsberg, in the province of Westphalia, in Prussia. In this district 773 establishments were investigated, 48 of them at night and 10 on Sundays. In the inspection district known as "Potsdam-Frankfort on the Oder," in the province of Brandenburg, Prussia, 738 establishments were visited, 25 at night and 15 on Sundays, of which 53 were called upon more than once. In the Berlin-Charlottenburg district, in the same province, 652 establishments were inspected. In Baden visits were made to 736 establishments. In two of the four districts in Bavaria 1,044 factories were examined. The smallest number of inspections were made in Hohenzollern, in the city of Bremen, and in the principality of Reuss (younger line), where 21, 63, and 71 inspections, respectively, were made.

The advice of inspectors is said to be sought very much by owners of factories in matters relating to the factory regulations of the Empire.

GENERAL STATE OF INDUSTRY.

In many districts the general state of business is said to have been in 1886 pretty much what it was in the preceding year; that is, that there was much overproduction, a great deal of competition, depressed prices, and small profits. The unfavorable situation in which the German farmers find themselves had then, as now, an injurious effect on trade. On the whole business is said to have been pretty active, and reductions of laborers' wages almost nowhere observable. The general state of the world's market and the downward tendency of prices of commodities have lessened the profits of manufacturers, but not diminished the wages of the working people to any extent. The supplanting of hand-labor with machine-work, which went on during the year to a considerable degree, made even an increased employment of factory hands necessary, and even in districts whose industrial situation was discouraging.

At the iron, copper, and silver mines, and in part at the coal mines also, business was bad. The iron trade has been in a bad state in Germany for some years past. "The unfortunate position," says the inspector for Reuss (elder line), "in which the iron industry has been for a long time, presses heavily on our miners of iron ore. At the close of 1886 not a single mine more was in operation, and of 128 ore mines, only 6, with 6 men to look after them, were in a passable condition. As it is not to be expected that an improvement for the better will soon take place, it is to be feared that our entire ironstone mining will soon go to ruin, just as was the case at the time of the Thirty Years' War." In this wretched situation the foundries, of course, shared somewhat.

The copper and silver mines likewise remained in a precarious state.

Brick and lime kilns, cement factories, and glass-works, were busily employed, as were all establishments manufacturing building materials, which, in consequence of the building activity going on in Germany, especially in the larger cities, had profitable work.

The industries connected with agriculture, such as the manufacture of sugar from beet roots, the making of spirit from potatoes, and the manufacture of starch, had an unprofitable year. These industries have been in an unsatisfactory condition for several years. Only in a few cases, it is said, were the sugar factories run without loss. As a general thing they were compelled to limit production and to reduce the hours of labor to one-half or two-thirds of the customary time, thereby materially lessening the earnings of their hands.

In the case of the spirit and potato-starch factories affairs are said to have been in a worse plight than in that of the sugar factories, and the losses sustained operated very prejudicially upon the farmers, and in addition to this there was a decreased demand for the products of the potato-starch factories.

With regard to the flour mills the reports differ in tone, some characterizing their situation as good, others as unsatisfactory. The small, old-time mills have been giving place to the new ones, driven by machinery, and the milling business of Germany is understood to be passing out of the hands of the many into those of the few.

The iron industry has been working under untoward circumstances, due largely to overproduction, but in the latter part of 1886 picked up somewhat. Otherwise was it in the manufacture of metal goods. The brass and metal foundries, button and hardware factories, and especially the needle factories, were well and profitably employed, and had to increase their force of hands.

In the machine works the situation was governed by the kind of work followed. Those working for agriculturists and the industries connected with agriculture had an unsatisfactory year, while those doing general machine work, making sewing-machines or machines for those branches of industry doing a good business, such as the paper factories and many branches of the textile industry, had a good and profitable year.

Ship building labored under adverse conjunctures, and had to complain of greater or less stagnation of business, especially with respect to iron ships.

The chemical works complained of low prices, particularly during the first half of the year.

In the textile industry there was much activity in many of its branches, especially among the weavers, and in cotton and woolen goods. In the manufacture of cloth in the district of Potsdam-Frankfort on the Oder there are said to be about 26,000 hands employed, of whom about 14,000 are women, at a weekly wage of 10 to 12 marks ($2.50 to $3), or 260,000 to 300,000 marks ($65,000 to $75,000) for the whole number, or about 15,000,000 marks ($3,750,000) a year, which is four-and-a-half times as much as is paid by the mines to their hands.

The cotton spinners met with reverses by the price of cotton-yarn falling, but no discharges of workmen or reduction of wages took place among them, although many of them found it very difficult to keep going. Says the factory inspector for Baden:

So long as with us in this branch of business twice as many operatives are required for 1,000 spindles as in England and the United States of America, and so long as

the organization of the market will not allow the individual factories to confine themselves to a very few numbers, will the operation of the factories not be a uniformly continued one, but be subjected to constant changes in their inner arrangement, with all sorts of unavoidable loss of time and incomplete performance of work; and the costs of production in this branch of industry are therefore disproportionately high in many instances, notwithstanding the low wages customarily paid. It differs, however, according to difference of their arrangement and organization.

Respecting leather, the reports were conflicting.

The breweries, chocolate, candy, and preserving factories were, in general, actively employed. The cigar factories, however, complained of severe competition and depressed prices.

Shoe factories did a good business.

GENERAL CONDITION OF THE LABOR MARKET.

There was an increase in the number of adult male workmen employed, as well as of young persons and women. So far as reports have been received on the subject it appears that adult male workmen increased 7.7 per cent. in 1886 over 1884, while there were 7.6 per cent. more females employed. Of every 100 laborers employed 27.2 per cent. were females on the average. Notwithstanding this increased employment of the laboring population, however, there were some parts of the empire in which the supply of hands was greater than the demand, notably in Baden and Würtemberg, where there is a superfluity of factory labor, while the farmers can not get help enough to till the ground and gather in the crops. In some districts, in some branches of industry, hands enough could not be obtained.

Wages are said, on the whole, to have maintained the same rates, though considerable advances took place in some instances. Reductions of wages happened in but few cases. Some few large discharges of workmen occurred, as did shortening of time. There was more increasing of wages done than reduction of them, however.

The inspector for the Dresden district gives the following as the average wages paid in his district, otherwise is not much said about wages, namely:

		Cents.
Hand-workmen	per hour	3¾ to 5
Factory operative	do	5 to 7½
Female workers	do	2½ to 3½
Young persons, fourteen to sixteen years old	do	1½ to 2
To a child twelve to fourteen years old	do	½ to 1

At piece work 20 to 25 per cent. more is made.

These wages he considers are ample for them, as is evident from the kind of food they live upon and the character of their clothing.

The factory operatives are said to be better compensated than working people who labor in the house industries, that is, making things at home, who live and work in low and small rooms, badly ventilated and poorly lighted, for trifling wages.

Wages are generally paid Saturdays. An effort has been made in some quarters to select some other day for pay-day, but has generally met with ill success, on account of the opposition of the working people to it.

A good deal of complaint is made about the quitting of their work by working people without giving notice of their intention to do so. The law is that fourteen days' notice shall be given. To hinder and prevent this evil, it is customary with some employers to keep themselves always indebted to their men to a certain degree, so that they

will not leave unceremoniously, for fear of losing their wages. Manufacturers also agree together not to take a man who has thus left an establishment.

In the most of the larger factories there are regulations for the government of their operatives. In some places breaches of factory discipline are governed by courts of arbitration set up for the purpose. These courts, or juries, are made up of employers and workingmen, in equal numbers, and their decisions have all the force of law, but they are powerless to enforce their decrees, which, however, are carried into effect by the communal authorities of the place. The arbitrators can be selected by election on the part of those whom they are to represent. These little courts, as I understand it, are governed by local regulations, and are under the brooding care of the state.

Some strikes happened during the year, but were mostly unfavorable in their results to the strikers. They generally ended with large discharges of workmen, or with fines and punishments imposed by courts of law for interference with peaceful workmen who desired to keep at work, or for excesses of some kind. The object of the strikes was generally to obtain higher wages and shorter hours of labor, or to prevent reductions in wages. Oftentimes the strikers were not justified, it is said, in making the demands they did.

HOURS OF LABOR.

Last year the reports dealt very largely with this subject, and are consequently not so full this year. The tendency is to less hours of labor, it is said, and the number of cases are constantly increasing where the number of hours worked are reduced from eleven to ten a day. The inspector for Middle and Upper Franconia says that he has frequently observed that the length of time labored increases the nearer a business approaches the border of pure industrial work and the more the workmen are left to themselves and have the time optional with themselves.

For the third and fourth districts of Bavaria the hours of labor are given as follows, without mentioning the industries, namely:

Hours of labor	No. of cases.	Per cent. of all.	Hours of labor.	No. of cases.	Per cent. of all.
Middle Franconia.			*Upper Franconia*—Continued.		
16	3	1.1	12½	1	1
15½	1	0.4	12	33	34.4
14½	1	0.4	11½	6	6.2
14	4	1.5	11	22	23
13½	1	0.4	10½	2	2
13	17	6.6	10	23	24
12	24	9.3	9	1	1
11½	1	0.4			
11½	19	7.4	*Lower Franconia.*		
11¼	1	0.4			
11½	4	1.5	13	1	2.2
11	85	33.1	12½	1	2.2
10½	1	0.4	12	3	6.7
10½	12	4.7	11½	2	4.4
10	55	21.4	11	15	33.3
9½	1	0.4	10½	7	15.5
9½	5	1.9	10	13	29
9	5	1.9	9½	1	2.2
8½	1	0.4	9	2	4.4
8	12	4.7			
7	3	1.1	*Upper Palatinate.*		
5	1	0.4			
Upper Franconia.			11	3	23
			10½	1	7.7
14 to 15	1	1	10	8	61.5
13	7	7.3	9	1	7.7

In Middle Franconia the industries are of a manifold character, and differ consequently largely in the number of hours worked, but 11 hours a day prevail. In Upper Franconia 12 hours of labor a day is the rule, as there are a great many textile factories there. In the Upper Palatinate the rule is 10 hours a day. But in the cities of Nuremberg and Fürth, where 11 to 12 hours a day are customary, many establishments close an hour or two earlier on Mondays and Saturdays, so that really only 62 to 64 hours a week are worked, instead of 68 to 70.

The forges in the vicinity of Nuremberg and Fürth, of which there are many, run by water-power, work, when in regular operation, 12 to 14 hours a day. Factories there making gold wire work 11 to 12 hours, while among the lead pencil, brush, and machine factories and iron foundries 10 hours prevail.

The porcelain factories in Upper Franconia are run 10 hours a day.

The color factories in Schweinfurt are kept going 10 to 10½ hours a day, and the horse-hair spinning-mills of Kitzingen 11 hours.

In the beer breweries it is said to be impossible to fix the hours of labor with any regularity of the men in the brewing rooms, though they are not allowed to exceed 16 a day. The other persons employed about the breweries work 12 to 13 hours.

One of the great obstacles in the way of shortening the hours of labor is the competition of kindred concerns. An attempt to effect such a shortening in the textile industry by agreement is thus reported from Dusseldorf:

> At the close of 1885 the Royal Government directed statistics to be taken of the number of hours worked in textile establishments, which showed that in eight, for the most part very large spinning-mills, over 12 and up to 14 hours a day were worked, and on cleaning days still more. An effort of the chamber of commerce to remedy this brought about an agreement among the spinning-mills of its district, which has been in operation since the 1st of September, to which, out of 40 firms, all but 5 subscribed, whereby they bound themselves, under a penalty of 50 to 1,000 marks (12½ cents to $2.50), which should be decided by a commission, not to work longer than 12 hours a day. The engagement, however, did not extend to masters, repairers, engine attendants, packers, pilers, dyers, bleachers, dryers, those exclusively employed in the open air, and assistants of those just described, thus excluding 10 to 25 per cent. of their men from its provisions. An extension of this time to 13 hours is, however, permitted for the entire factory for, at the longest, 24 working days, when a previous interruption of work of at least half a day is to be made up, and when thereby the number of hours worked a week do not exceed 72. For the reel and bobbin rooms, too, 13 hours of work are allowed in exceptional cases not capable of nearer description; and the operation of the cleaning machines and scrapers in the spinning rooms whose other machines stand still a quarter of an hour each forenoon and afternoon it is provided may always be kept up 12½ hours. As much as it is to be recognized that the influence of the short-working spinning-mills has achieved a victory over the long-working minority, it is to be regretted that it is not more far-reaching in its effect. Whether this compact would prove any more enduring than that of 1868, in the event of a boom in the industry, remains to be seen.

It is often experienced that by shorter hours of labor as much work is turned off as under long ones, as the hands work more industriously to avoid a diminution of income.

Little is said about work on Sundays. This is a matter which has been the subject of special inquiry by a committee appointed for the purpose, who have finished their labors and prepared a report for submission to the Bundesrath and Reichstag, with a view to legislation on the question, which report has just been made public. They were directed to ascertain to what extent the workingmen of the Empire are compelled to work on Sundays, and to obtain the views of employers regarding the limitation and prohibition of such work.

I have not seen this report itself, but have met with articles in the newspapers regarding it. It appears therefrom that the great body of large manufacturers and leading business men of the Empire consulted on the subject have declared absolute prohibition of work on Sunday impracticable, but a majority seem to have expressed themselves as favorable to limitation. A large number of manufacturers, representing the different branches of industry, were questioned upon the subject, as well as a number of industrial bodies.

The committee report shows that it is customary in a very large number of establishments for work to be done on Sundays. In those employing machinery it is common with 49.4 per cent. of them, for 29.8 per cent. of their workmen. In the establishments where handwork is done, it is usual with 47.1 per cent. of them, for 41.8 per cent. of their workmen. In trade and commerce 67.8 per cent. of the houses are open on Sundays, keeping 57 per cent. of their employees busy. Neither factories nor business houses are kept going the whole day as a general thing, but there are many that do use the whole of Sunday. The result is that a very considerable part of the German working people get little rest on Sundays. The disposition to remove the evil by legislation is a step in the right direction.

SPECIAL TOPICS FOR REPORT.

Each year the factory inspectors are expected to give their attention particularly to some one topic designated beforehand by the Government. In 1885 it was hours of labor, last year female laborers. They were directed to specially report (1) to what extent females are employed in industrial establishments, which—aside from any night labor—are accompanied by particular dangers to health and morals, especially for the physical and moral development of youthful females; and (2) what arrangements have been provided by employers, or with their co-operation, to fit them for domestic life and work.

FEMALE LABORERS.

According to the majority of the reports there was a greater employment of women in 1886 than in 1884. The average increase is put at 7 to 8 per cent., which is said to be the rate of increase observed among factories and factory operatives generally. Male labor is affirmed not to be giving place to female.

Of every 100 factory hands 27.2 per cent. are said to be females on the average throughout the Empire, with the rate much higher for some parts and much lower for others. It is in the textile factories, factories preparing foods and factories making and cleaning clothing, that most of the women are employed, and next to them the industries working on stone and earth and on paper and leather. These, altogether, have about 90 per cent. of all the women employed in the factories. In the textile industries about one-half of all the hands employed are females, and in some districts the percentage is even greater. In the kingdom of Saxony 64 per cent. of the textile hands are women; in the Breslau-Leignitz district, 56 per cent.; in the Black Forest, in Wurtemberg, 73 per cent., and in the two Reusses 90 per cent.

Next to the textile establishments the tobacco and beet-root sugar factories, chocolate and candy factories, starch, chicory, and preserving factories, call for women, on account of their attention, clean-

liness, and dexterity, and a large part of their working force is of the female sex. In wearing apparel and cleaning it is principally in the establishments making ready-made clothing, corsets, flowers, feathers, and shoes that women are numerously employed, and most of them show an increased employment of women for the year.

Many women are employed in the match factories and in the factories making metal buttons, toys, glass pearls, and fancy jewelry. In Silesia many women are employed in the mines and founderies.

Females receive, as a rule, much lower wages than men. The same remarks made as to changes in the wages of men are said to be applicable to those of women.

Regarding hours of labor, it is said that, as in the case of men, great differences exist. The inspector for the Plauen district says that it is harder to get them to work overtime than the men.

There was no increase in night-working, but rather a decrease.

Where women work at home in industrial pursuits they work much longer, for less wages, than in the factories—oftentimes far into the night.

On the question, to what extent women are employed in industrial establishments, which, aside from any night labor, are accompanied by particular dangers to health and morals, especially for the physical and moral development of youthful females, the replies are said not to be satisfactory. Many inspectors responded to the question in both its aspects in the negative, saying that the work of the females, especially of the youthful ones, was suitable, and gave no occasion for apprehension; others reported that where these dangers existed they were exceptional, and that in general the manner in which women were employed was satisfactory.

DANGEROUS EMPLOYMENTS.

Mines, furnaces, salt-works, and turf digging.—The inspector for the Oppeln district says that in 98 works in his district belonging to these industries, including ore-raising, there are 24,818 persons employed, of whom 20,517 are males and 4,301 females, and that 32 per cent. of all the women are employed in the zinc furnaces, and at certain seasons of the year, as many in the raising of ore, while in the iron and steel works and furnaces 23 and 17 per cent. are found. At the zinc-works they are used in different ways. The kind of labor rendered by the women is attendance on the "blende" and clay-mills, bringing of ore and coal to the furnaces and removal of the ashes from the ash-canals under the furnaces. In some furnaces women are used in taking the zinc from the receivers, and in taking out the ashes that remain in the molds after the termination of the distillation processes, which takes place between the hours of 3 and 11 in the morning. In the most of cases the women are kept busy in carrying burdens, which keeps them mostly in the open air, and but little in the works, so that they are not exposed, to any serious extent, to conditions unfavorable to health. In the matter of service at the furnaces in the early morning hours it is otherwise, as dust and steam from the zinc fill the work-rooms while trying labor has to be performed, under a high temperature, and in drafts. The labor at the "blende" and clay mills is less taxing to the strength, but the dust arising is injurious, and the women are constantly liable to injury from the rotating machinery. Female labor in regular furnace work is but seldom met with, and is contrary to governmental regulations.

In the bringing up of iron ore women are used day and night, and principally in tending the windlasses and rolling wheelbarrows. The iron ore is brought to the surface by means of windlasses, to work each of which there are four to six girls, according to the depth of carriage. Where the depth is 20 meters (about 65 feet) four girls in 8-hour turns wind up 80 buckets of iron ore, each of which hold from 1 to 1½ centner of ore (110–165 English pounds). The wages are very low, but the work is preferred by the girls to domestic service, because they are at it but eight hours at a time and can then do as they please. The inspector thinks that it is not to be expected that machinery should displace these women, because they are cheaper than machines would be.

In the furnaces, and in the iron and steel rolling mills, the regular work of iron forgers is performed only by men. The work done by the women is that of bringing coke, ore, and limestone to the furnaces, pouring water on the glowing coals, and removing the ashes and slag from the puddle-work.

Industries working in stone and earth.—In the vicinity of Oppeln and Gross-Strehlitz 677 females are employed in the manufacture of cement and lime. This work, on account of the dust they inhale, is injurious. They carry limestone to the kilns and heavy loads of bricks from the presses to the drying-rooms, which is entirely too trying for them. They also work in the clay and sand pits.

In the potteries and earthenware factories of Meissen and Leipsic women are sometimes used to lay on glazes containing lead. In the Baden stone-cutting works they are used in polishing lead plates. Both these occupations are injurious to the health.

From the Saalfeld-Meiningen district it is reported, regarding the porcelain factories, that formerly lung troubles occurred much more frequently among both male and female workmen than at present. The general health of the workers is better, because the rooms in which they work are now higher and better ventilated than formerly. In turning, machinery is now much used, to the great benefit of the health of the workers.

Working in metals.—The use of women as grinders and polishers of hardware is considered very injurious.

Chemical industry.—Work in the match factories has a very bad effect on the health, but a law of the Empire regarding the matter, whose provisions I have not before me, is said to materially diminish the chances for disease from this work. This is effected by technical precautions and medical control.

Textile industries.—These employ a great many women, and the inspectors generally report that they are not particularly injurious to women. Says the inspector for the Treves-Aix-la-Chapelle district:

> It may be stated as a satisfactory fact, after careful inquiries by me, that in my whole inspection district no females are employed in establishments which are accompanied with special dangers to health or morals, particularly for the physical or moral development of young women. In the governmental district of Aix-la-Chapelle—city and vicinity of Aix-la-Chapelle—it is principally the large establishments in the textile industry and the sewing-needle factories, and, in a secondary degree, the cigar and paper factories, and in the chief industrial district of the governmental district of Treves the large ceramic factories, that many females are employed, mostly in a perfectly suitable manner.

The inspector for the Cologne-Coblentz district says that in almost all the establishments making textiles a large number of women are employed, and that he has no knowledge of any improper employment of women having taken place.

On the subject the inspector for Saxe-Weimar says:

The work in the factories, in respect to kind and continuance, is perfectly adapted to the strength, and no injurious effect upon the health or morals of the young laborers has become known to me, especially to the women. The latter are mostly employed in the textile factories, at sedentary occupations, in roomy and light rooms, that are usually very warm. They are very much used at the sewing-machines. Nevertheless, they have a healthy, bright look, and pallid or miserably looking young girls have so seldom been met with by me, that I must regard the regular factory work, accompanied by more or less exercise in the open air, as more conducive to health than the employment of young girls in house industry, often even as more favorable than in family life.

The inspector for the Dusseldorf district says that the women work in less danger to accident than the men, but that the liability to sickness is greater among them than among the men. In the unventilated weaving-mills of his district he reports the number of cases of sickness occurring as averaging 61.5 per cent. among the men and 55.7 per cent. among the women. In one establishment he says the rate was up to 116 per cent. among the men and 91.2 per cent. among the women, while in a moderately ventilated weaving-mill, weaving colored cloth, the rate was only 36 per cent. for the men and 44.4 per cent. for the women. The good effects of the artificial ventilation of the work-rooms, he remarks, is noticeable in the statistics of the flax-spinning mills, which generally work twelve hours a day, namely, 35.1 per cent. of cases of illness among the men and 44.1 per cent. among the women. The flax-mills are generally regarded as much more unfavorable to health than the cotton-mills; but the inspector for Dusseldorf says that the statistics of his district show the contrary to be the case. The number of cases of illness among the women in the cotton-mills is 50 to 150 per cent. greater than in the flax-mills, and the risk of injury among all workmen 100 per cent. greater in the case of the former than in that of the latter. Good ventilation, he considers, of the cotton-mills would largely modify for the better this unfavorable showing.

With regard to the silk and velvet factories the Dusseldorf inspector says that, among unventilated establishments the silk factories make the best exhibit in the matter of health, while the velvet and plush factories make the most unfavorable. The bad air has much to do with the rate of sickness. One of the largest plush factories, during the first six months of the year, when the ventilation was poor, had 54 per cent. of its women sick, but for the second half of the year, after a regular ventilation of the rooms and moistening of the air had been introduced, the rate fell to 32.9 per cent.

The wool-combing mills are considered very injurious, on account of the fearful dust ever present in them, when there is not good ventilation.

The inspector for the first Bavarian district, comprising Upper Bavaria, Suabia, and Neuburg, reports that the cotton-mills there, where the raw material for their use is cleaned and prepared, are not particularly dangerous to the health of the thousands of women employed in them, as the work is done by closed machines, from which the dust is drawn off by currents of air. But much more unfavorably situated are the hemp, flax, and tow factories of his district. These are very injurious. In them 1,176 women are employed, 61 of which are young girls.

The inspector for the second Bavarian district thinks that women can operate the spinning-machines and mechanical weaving-looms without danger to themselves.

From the Leipsic inspector complaint is made of the effects of long standing while at work on the health, while another Saxon inspector, the one for the Bautzen district, says that with the exception of a few overcrowded work-rooms in the weaving, button, and flower factories, as well as in several weaving-halls, where much dust is raised, he has noticed but few conditions dangerous to the physical well-being of the female population on the whole. The Leipsic inspector also reports that women are used in his district in the vulcanizing of rubber goods, and that this work is injurious to them, as they inhale the steam and dust from the coal and sulphur. The Hamburg inspector also reports that the women in the factories there suffer from the prevailing high temperature, although the work-rooms are spacious, well lighted, and nicely gotten up.

The report of the inspector for Baden treats chiefly of the young girls. The establishments dangerous to their health, he says, are those making artificial wool, sewing silk, on account of the dust arising from the color-cleaning machines, the weaving-looms (tended mostly by women somewhat advanced in years), whose noise is deafening and destructive of the hearing; and the cotton-mills, on account of the dust, smell from the oil, and evaporation, the high temperature, and the constant standing. He seems to be opposed to the use of young girls in the tricot factories, in the dye-works, and in the printing offices, where they are mostly used in looking over and sorting out goods, because too much exactness is often required of them, which is a strain upon their mind and nerves, and because they are made to work under heavy penalties for mistakes.

Physicians consider the selection and cleaning of wool by young girls in the cloth factories as injurious to their health, as also labor in silk-winding and floret-silk spinning-mills, but the inpector for Baden says that where some physicians have attributed cases of pulmonary consumption in part to the inhalation of silk dust, he has perceived no injurious consequences.

Paper and leather.—These are held to be industries injurious to women in certain respects.

Industries manufacturing foods and luxuries.—According to the inspector of the Madgeburg district, the employment of women in the beet-root sugar factories and refineries has materially lessened, as injurious to them physically and morally, and the inspector of the Breslau-Liegnitz district says that they are disappearing more and more from these establishments, and are being used now only to clean the floors and staircases.

The Leipsic inspector classes the starch factories among those injurious to women.

The cigar factories come in for a large share of complaint, both on account of injury to health and morals. I should say that they are hot-beds of vice. A great many of these factories are in Baden, and respecting them the inspector for that duchy thus expresses himself:

> That working in cigar factories is injurious to young girls, both in health and morals, as well also, in a less degree, to adult females, is generally known. I will here only remark that in districts having a developed cigar industry, the physicians say that the frequent occurrence of cases of pulmonary consumption and the great increase in illegitimate births have been known only since the erection of the cigar factories. In some districts the deaths from consumption have been mostly among cigar-makers, although the cause of this mortality may be partly due to the fact that just the weak and sickly seek work in the cigar factories. The illegitimate births also, in sundry districts, are mostly among the cigar-factory operatives.

Other inspectors report the condition of the operatives of the cigar factories as being more favorable.

In the cigar factories a great many children from twelve to fourteen years old are employed, as well as young persons fourteen to sixteen years of age.

IMMORAL INFLUENCES.

The most of the reports say that in the case of the most of the industrial establishments no particular dangers to morality exist. The majority of the inspectors are of the opinion that the dangers to which women are exposed in this respect are to be met with less in the factories than outside of them, in the conditions under which they live. In the factories the women are kept apart from the men; as much as possible in separate rooms. Both men and women use the same wash and dressing rooms and privies in many establishments, but the providing of separate places for the two sexes is increasing, especially in the new buildings. In the old and small establishments much remains to be done, it is said, to remove the dangers to morality to which women are exposed.

The working together of both sexes in rooms where there is a high temperature is said to have a bad effect upon the morals of women. The textile factories come in for a good share of blame in this respect. The Dusseldorf inspector says that the spinning-mills of every branch are bad where there is a mixed employment of the two sexes in the same work-rooms, and especially those where the time of labor is long, the ventilation poor, the temperature high, and the washing and dressing rooms the same for both sexes; and also similarly situated weaving-mills, factories making artificial wool, factories making wearing apparel, etc. Other inspectors also point to the textile factories.

I have already remarked, under the preceding caption, that the cigar factories have a bad reputation. The two sexes, however, are being kept more and more at work in separate rooms.

Many sugar factories are objectionable from moral considerations, in whose hot rooms the women have to wear little clothing, and partly bare the body.

Objection is made to chicory and rubber-goods factories on the same ground as to the sugar factories, that the women work half naked in hot rooms alongside men.

In some factories, where the men and women sleep at night, complaint is made that the halls or rooms are not properly separated from one another.

The inspector for the Potsdam-Frankfort on the Oder district calls attention to the manner in which women are employed in railroad construction. He says they can be seen, with their legs bare and their dresses tucked high up, pushing wheelbarrows in mud and wet sand. Every spring large numbers of farm hands come from the eastern provinces of Prussia to Brandenburg to take part in the harvesting. In summer, after the harvests are over, they have nothing to do, and as they do not like to make the long journey home—for in the autumn they find an abundance of work when the potato and beet-root crops are gathered in—they undertake any labor until the fall crops are ready, and building work is well paid.

Female work in the brick-kilns is objected to, because it is hard, and because the women have to work with their lower limbs bare.

TRAINING FOR DOMESTIC WORK.

With reference to the second point to which the inspectors were directed to devote their attention, namely, what arrangements have been adopted by employers, or with their co-operation, to fit young women for domestic life, it is said that, even among employers who look with favor upon efforts for the advancement of the well-being of working people, and have done much for their employés in other directions, they frequently show no particular inclination to provide for the instruction of their female employés in housework. The report from a number of districts is, that experiments heretofore made in this direction have ended in failure. In the Postdam-Frankfort on the Oder district several large manufacturers, possessing isolated factories, once started some working-peoples' kitchens, and tried to induce their factory girls to learn how to cook, but after the kitchens had been some years in operation, at considerable expense, they had to be given up, because the working people did not take to them. They always suspect, say these manufacturers, that every thing of the kind that is done for them is done with a view to enriching the employer. Some of the reports allege that the women themselves are unfriendly to such instruction. The factory women, it is said, think of nothing but the present. They have generally a very limited education and like an independent life, which is the reason generally why they leave their homes, and will not submit to any strong rules. In most of the larger factory towns they get pretty cheap board, and never turn their hands to any cooking, and seldom to their own clothing or washing. So long as they remain single they do pretty much as they please, and give no thought to sewing, mending, or cooking.

In a number of districts, as in Hesse-Nassau, in certain parts of the Cologne-Coblentz district, in various parts of Würtemberg and Waldeck, and in Hamburg, girls, as a rule, seldom remain longer in the factories than up to their sixteenth to twentieth year, when they go into domestic service as servants.

In the iron districts of Silesia the manner of life of the laborer's family is so extremely modest, that any woman, without any previous preparation, can undertake housekeeping. The working-men of Upper Silesia require so little of a wife in domestic respects, that even the young women who from childhood have done nothing but the roughest kind of hand labor are sought after.

In the district of East and West Prussia the greater part of the factory women are said to live with their families, and find time, when free from work, to learn and practice housekeeping. In laboring families the children are early taught to be an aid to their mothers in household work, and up to their fourteenth year are taught to cook simple dishes, and to learn how to wash, scour, and mend, etc.

In the Kingdom of Wurtemburg by far the greater part of the factory women are also said to live with their families. Women living apart from their families are said to be few in number and to be found only in the larger towns, the most of whom are employed in the cigar factories, printing offices, and jewelry factories. The wages the women make go to their families rather than to their own direct support. In this Kingdom sewing and knitting is learned by the children of the poor in the public schools, with which many schools for teaching sewing and female work are connected in the

country. As a result of this kind of education few working women are to be met with in the Kingdom who cannot read and write and also sew and knit.

In Hesse-Nassau, Saxe-Weimar, and Schwarzburg-Rudolstadt young girls have plenty of opportunity at home to learn household work, and no provisions in this respect in their behalf are necessary. The like is reported from the Bautzen district in Saxony.

In the larger towns, especially where very young girls are living away from their families in a boarding-house, or where the hours of labor are very long, and lengthy the way from their home or room, little experience in household work is obtained. This is the case with respect to the cigar, textile, and jewelry factories and others. The girls in Baden, for instance, enter these factories when children and remain in them until married, and even after that often-times. They are kept twelve or thirteen hours at work, including resting pauses, and often have a long way to go to and from work. To cooking and the like they are generally strangers. Even during the short time that they are at home with their mothers in early childhood they learn nothing, for the mothers are generally away the greater part of the day at work in the factories.

In view of the above-mentioned circumstances, is it explainable that in many inspection districts no arrangements have been made by manufacturers for their female employés to learn the domestic duties of life? Such districts are those of East and West Prussia, Berlin-Charlottenburg, Potsdam-Frankfort-on-the-Oder, Posen, Oppeln, Merseburg-Erfurt, Schleswig-Holstein, Hanover, Minden-Münster, Cologne-Coblentz, Hohenzollern, Lower Bavaria, Upper Bavarian Palatinate and Regensburg, Middle Franconia and Upper Franconia, Bavarian Palatinate, Lower Franconia and Aschaffenburg, Plauen, Baden, Mecklenburg-Schwerrin, Saxe-Weimar, Oldenburg, Coburg-Gotha, Anhalt, Schwarzburg-Sondershausen, Schwarzburg-Rudolstadt, Waldeck, the two Reusses, Bremen, and Hamburg.

In the other districts, which have very much a highly developed industry and a numerous laboring population, there have been, when circumstances called for it, arrangements provided in many places by manufacturers, or with their co-operation, for making their female employés acquainted with household work. Such districts are those of Posen, Breslau-Liegnitz, Magdeburg, Hesse-Nassau, Arnsberg, Dusseldorf, Treves-Aix-la-Chapelle, Upper Bavaria, Suabia and Neuburg, Zwickau, Leipsic, Bautzen, Meissen, Wurtemburg, Hesse, Meiningen-Saalfeld, and Saxon-Altenburg.

(1) In Posen there are a few factory schools, but they teach only what is learned in the other schools, namely, chiefly lace-making and embroidering; sewing is only taught secondarily, and mending not at all.

(2) In the Breslau-Liegnitz district there are undertakings at Allersdorf, Wüste-Waltersdorf, and Sachran. There is also a spinning and worsted factory at Neusalz, where a people's kitchen for the 300 girls employed in the factory has been established. There is also connected with the factory a school for teaching hand-work. Similar undertakings exist at the iron-works at Marienhütte, near Kotzenau and Mallnitz.

(3) In the Magdeburg district a branch society of the "National Women's Union" has been formed at Starsfurt, to which manufacturers make liberal contributions. The "Young Women's Union" is attended every Sunday evening by about 29 young girls from

fourteen to eighteen years old, and the knitting-school by about 90 children. At Schwanebeck is a school with 25 pupils.

(4) In Hesse-Nassau, in a few cases, factory girls are taught sewing, mending, and knitting, but no arrangements for fitting them for household work, in the wide sense of the term, exist.

(5) In the Arnsberg district there is the Lüdenscheider factory school, which teaches girls, after they have received instruction from their eighth to their twelfth year for two hours each week in knitting and the rudiments of sewing, for four hours each week sewing, knitting, and darning. This instruction is obligatory. There are two other schools for teaching hand-work to women, and beyond this no other steps taken to fit girls for domestic work.

(6) A larger number of undertakings to improve young women are met with in the Dusseldorf district.

One is the industrial school belonging to the smelting-works "Good Hope," at Oberhausen. It has been in operation since 1880. Instruction is imparted by a well-qualified teacher, with three well-paid assistants, on four days of the week in summer, and on two in winter, for two hours each day. Two rooms are used, of sufficient size, in one of which children from six to ten years old learn knitting and darning, while in the other the older children, from ten to fifteen years of age, learn sewing and mending. The first division is attended by 60 to 70 children, the second by 40 to 60. The stuff on which the children work they generally bring with them from home, but in the fall of the year they work mostly on materials furnished by the works for making up stockings, aprons, shirts, and clothing to be presented to poor children at Christmas. The instruction is only for the children of the working people of the works at Oberhausen, and is rendered free of charge.

Another is the case of three schools connected with the Krupp works at Essen.

In the large Krupp school-buildings belonging to the colonies Kronenberg and Nordhof the girls of school age have been instructed since 1875 in knitting, darning, sewing, mending, and crocheting. The instruction is given on the afternoons when there is no school, and is principally participated in by the children of Krupp's people. A school fee of 5 cents a month is paid by the parents of the children, who, if they regularly attend the instruction for a period of fifteen months, have the amount paid by their parents refunded to them in the shape of a savings-bank book, showing a deposit of 75 cents. Those whose parents have no means at all are instructed free of charge. The teachers are relatives of deceased employés of the works. The expenses connected with the running of the schools are borne by the Krupps. The industrial school at Nordhof is attended by 624 children, and the one at Kronenberg by 690.

The Krupps have also an industrial school at Essen for women, where they learn hand and machine sewing, dress-making and mending. Instruction is given on week days from 9 to 12 o'clock in the forenoon and 2 to 5 in the afternoon. The women bring their materials with them, and can turn over what they make to the Krupp Co-operative Union, which pays them for it. On two afternoons in the week instruction is imparted in ironing. Instruction is rendered in whole or half day courses. A slight tuition is paid, but the women of no means, or who are of the family of deceased employés of the works, have nothing to pay. In the year 1885–'86 the average attendance was, 8 instructed free, 68 belonging to the works, and 52

strangers; in all 128 persons. The most of the pupils were from 14 to 18 years of age, and it is worthy of mention that, side by side with the daughters of simple factory operatives, studied those of people of means.

The firm of David Peters & Co., at Neviges, have:

I. A school for hand-work for children of school age, where twice a week, for two hours each time, they are instructed in sewing and knitting, and also in crocheting and embroidery, when desired. As school money, 12½ cents a month is paid. In 1886 the average attendance was 31 children.

II. A school for hand-work for women, which is divided into two parts, one for girls 14 to 16 years old, and the other for adult women. The instruction takes place three times a week, from 8 to 9.30 o'clock in the evening, after the close of factory work. Sewing, mending, darning, and dress-making are taught. Some 16 to 18 females attend the school. A fee of 15 cents a month is paid for the instruction. The women bring their own materials with them, but when they are too poor to do so they have them furnished to them. Rooms, fire, and light are supplied by the firm gratis.

III. An ironing school for factory women and their daughters, where a course is three months in duration. For this period four evenings in the week, from 8 to 9.30 o'clock, ironing is practiced. Only 8 to 10 girls can be instructed at a time, but a great many more apply for admission.

IV. A cooking and housework school for adult factory women and their daughters, wherein on seven week days, from 9 in the morning to 3 o'clock in the afternoon, 2 to 3 women are practically instructed in cooking and housekeeping. The course lasts four weeks, and is so arranged that each week a new pupil enters, who begins with making the fires, scraping potatoes, washing vegetables, and the like, and gradually advances until in the last week she learns to spread the table and wait on it. The food cooked is eaten partly by the pupils and partly by boarders, the first of whom pay 5 cents and the latter 7½ cents for a dinner. In making the dinners it is insisted upon that their average cost shall not exceed 7½ cents a person. The pupils in the school do not have to pay for the instruction, but on the contrary receive 75 cents a week as partial indemnification for the wages lost. The school has been in operation since May, 1886.

A firm in M. Gladbach has a sewing-school for its employés, as has also one in Lennep.

At M. Gladbach is a Catholic Working Women's Union, which has existed since 1860, and was founded by priests with money collected from manufacturers and others in voluntary contributions. About 400 women belong to this Union, about 100 of whom are 15 to 16 years old. The Union is composed of honorary members, who pay 75 cents a year at least into its treasury, and active members, who pay 1 cent a week, and must be blameless women. The object of this Union is to provide an asylum for factory women, and keep them away from boarding-houses. In the Union's building instruction is given in hand-work, cooking, and ironing.

Similar institutions to that of the one just described, but supported in part by employers of other confessions, exist in Viersen, Hochneukirch, Neuss, Werden, and Dusseldorf.

In Altenessen there is an industrial school, established by the commune, where 3 sewing-machines are given each year as prizes to the

most industrious and punctual pupils. They are provided by the directors of a mine, and distributed among the daughters of the miners belonging to it. The school costs about $300 a year, about one-half of which sum is borne by the commune. In 1886 the school was attended by 53 girls beyond the school age, of whom 22 were the children of miners and 5 of factory women. Knitting, crocheting, embroidering, sewing and the like are taught. An attempt was made to teach cooking, washing, and ironing, but did not meet with proper success. The duration of attendance on the school is put at 6 months for the average.

In 1883 the town of Duisburg established 2 factory schools for girls, on which it spends $250 a year, leaving the rest of the expense to be borne by some private individuals, among whom are four manufacturers. Instruction is given in hand-work, arithmetic, and German. Only the instruction in hand-work is well attended, in which some 70 girls regularly take part.

Lennep has a school for hand-work, called into being toward the end of 1886, whose object is to have females of over fourteen years of age belonging to the laboring classes instructed in such work of a domestic character as is necessary to every woman. The school was started by a branch society of the Lennep "Union for the Common Good." This branch society numbers 114 active and 250 inactive members, the first of whom, educated women and girls, are all bound to an annual contribution of at least 25 cents to regularly aid the instructions. The town of Lennep grants about $75 a year and the State about $65 a year to the undertaking. Instruction is rendered by a teacher of hand-work and by two members of the board of directors of the society and two other ladies (the active members of the society serving in rotation as the last four), and takes place from 8 to 9.30 o'clock in the evening, twice a week. The subjects of instruction are the making of body and bed linen, simple pieces of clothing, knitting, and all kinds of mending and darning. There are 50 pupils, 40 of them being over sixteen years of age. The learners are expected to furnish the materials on which they work, but when too poor have them provided for them.

(7) In Upper Bavaria is a twine factory, at Immenstadt, which for ten years has had an institution for its girls who live alone, where they can get good board and lodging at moderate rates, and find opportunity to become practiced in household work. The girls are required in rotation to serve in the kitchen a week each, and on Saturdays to clean down the steps and fix up the rooms. The demand for reception into the institution is greater than the room at hand. The most of the girls are from eighteen to twenty-four years old. For board, lodging, and washing only 15 cents a day have to be paid, and yet this amount is sufficient to cover all expenses connected with the institution.

(8) Regarding the Zwickau district it is said that, besides the instruction in feminine work prevailing in nearly all the schools of the district, there are schools maintained by the State for teaching lace-making and knitting, in which, besides the industrial education, the children are taught diligence, order, and cleanliness. Schools for lace-making are to be met with in sixteen places of the district.

In Schwarzenberg, at the instance of the Queen of Saxony, a school for females of miners' families has been established to ground them in household work of all kinds. The cost of instruction is $3 to $4.50

quarterly. In connection with it is an evening school, where, for 5 cents a month, women and girls once a week for two hours can receive instruction in sewing, darning, mending, and cutting.

The number of persons in the institution amounted to 46 in 1884-'85, and 55 in 1885-'86. The working girls, however, as soon as they have any employment remain away from the school, and the complaint is made that in this school, as in the embroidery schools, just the girls belonging to laboring families for whom the institution was erected attend it very little, notwithstanding exemption from tuition and free places provided for girls of no means.

(9) Leipsic has its "home for working-women" and "evening school for working-women," which aim to have a good effect upon factory women and to teach them coarse hand-work. The first mentioned has room for 40 persons, but the factory inspector reports only 24 there. The evening school is better attended.

(10) The "German jute spinning and weaving mill" in the Meissen district, in Saxony, has an evening school for adult females. At first the pressure for admission was so great that a selection of 30 women had to be made for instruction. Since then the number of pupils has fallen off. Up to October, 1886, the number of women receiving instruction amounted to over 20, but since then had gradually sunk to 8.

A paper factory at Kriebstein has for several years had a kindergarten whose teacher is accustomed to giving instruction in hand-work to the girls of the place ten to twenty years old. Twice a week this is done from the hours of 6 to 8 in the evening free of charge, and is well attended, especially in winter.

The towns of Döbeln and Schweikershain have schools, established by ladies, for teaching girls the use of their hands.

(11) For Wurtemburg the report is that a paper factory at Dettingen for twelve years has had a sewing-school in which every year three girls are instructed a whole quarter in hand-sewing free of charge. The expense is stated to be $300 to $325. While under instruction the girls are paid their regular wages.

A factory in Neufra has a similar school.

In Stuttgart is a "house of refuge" for factory women, supported by a number of manufacturers, where, while the women are there, they are instructed in sewing, knitting, etc.

(12) Hesse.—A leather firm at Worms, in Hesse, has a very successful sewing and industrial school for its female employés. When the firm gave notice of its intention to start this school of 500 females in its employ, 190 made application for admission to it. The women were divided up into five classes, according to age, running from fourteen to nineteen years. Every evening from Monday to Friday, from 5 to 6 o'clock, the school is open. The attendants learn to knit stockings, and to make aprons, neck-cloths, jackets, and shirts, and to mend and darn. The materials used are supplied by the factory free of charge, and the things made become the property of the makers. This year the factory also started a cooking school for its very young girls.

The foregoing enumeration of cases of effort to teach the factory girls and women of Germany how to use their hands in household work to some extent may be somewhat tedious reading, but it will give an idea of what is being done in this direction. The fact is that the conditions of life should be such that women need not be in

the factories at all, or at least to a slight extent. What has been cited does not show that much has been done to ground them in the arts of domestic life.

CHILDREN AND YOUNG PERSONS.

Next to women the reports of the factory inspectors give the most information concerning the employment of children and young persons in the factories, over whom the Government exercises a jealous care.

The number of children employed in the factories was 21,053 in 1886 against 18,882 in 1884, and the number of young persons 134,529 in 1886 against 135,377 in 1884; thus an increase of 2,171 in the case of the children and a decrease of 938 in that of young persons. By children are meant boys and girls twelve to fourteen years old, and by young persons boys and girls fourteen to sixteen years of age.

According to sex there were 64.3 males to 35.7 females in every 100 children employed in 1886, against 63 males to 37 females in 1884. The percentage of increase in males in 1886 over 1884 was 13.8 per cent., in females 7½ per cent.

The ratio of boys to girls in every 100 children employed was as follows in the various industries:

Industries.	Boys.	Girls.	Industries.	Boys.	Girls.
	Per ct.	*Per ct.*		*Per ct.*	*Per ct.*
Mines, forges, and salt-works	93.4	6.6	Textile industries	50.6	49.4
Working in stone and earth	90.2	9.8	Paper and leather factories	63.1	36.9
Metal-working	79.3	20.7	Carving and working on wood	79.6	20.4
Machines, instruments, and apparatus	92.6	7.4	Foods and articles of luxury	60.3	39.7
Chemical industry	67.1	32.3	Making and cleaning clothing	40	60
Forestal side products, lighting stuffs, fats, oils, and varnish	72.3	27.7	Polygraphical establishments	81.2	18.8
			Other branches	71.7	28.3

In the textile industry they were employed in almost equal numbers, and only in the making and cleaning of clothing were the girls in any division of industry in excess of the boys. In all other cases there was a much larger percentage of boys used than girls.

Fifty per cent. of all the boys employed and 75 per cent. of all the girls are to be met with in the textile industries, and in the establishments where clothing is made and cleaning done, as will be seen from the following exhibit:

Industries.	Boys.	Girls.	Industries.	Boys.	Girls.
	Per ct.	*Per ct.*		*Per ct.*	*Per ct.*
Mines, forges, and salt-works	5.9	0.7	Textile industries	28	49.1
Working in stone and earth	13.2	2.6	Paper and leather factories	4	4.2
Metal-working	7.2	3.4	Carving and working on wood	5.7	2.6
Machines, instruments, and apparatus	4.7	0.7	Food and articles of luxury	2.2	6.1
Chemical industry	2.1	1.8	Making and cleaning clothing	22	26.2
Forestal side products, lighting stuffs, fats, oils, and varnish	0.3	0.2	Polygraphical establishments	3.4	1.4
			Other branches	1.3	1

Respecting the young persons there were 63.9 boys employed in 1886 to 36.1 girls, against 64.3 and 35.7, respectively, in 1884 in every 100.

The ratio of males to females in the different industries was as follows:

Industries.	Boys.	Girls.	Industries.	Boys.	Girls.
	Per ct.	*Per ct.*		*Per ct.*	*Per ct.*
Mines, forges, and salt-works	94	6	Textile industries	38.7	61.3
Working in stone and earth	84.2	15.8	Paper and leather factories	52.7	47.3
Metal-working	80.4	19.6	Carving and working on wood	79.5	20.5
Machines, instruments, and apparatus	92.7	7.3	Foods and articles of luxury	55.5	44.5
Chemical industry	61	39	Making and cleaning clothing	28.8	71.2
Forestal side products, lighting stuffs, fats, oils, and varnish	52.7	47.3	Polygraphical establishments	75.7	24.3
			Other branches	63.3	34.7

The proportions differ somewhat in the case of young persons from those of children.

The textile industries and the factories making foods and luxuries employed almost half of the whole number of youthful laborers, as appears by the following table:

Industries.	Males.	Females.	Industries.	Males.	Females.
	Per ct.	*Per cent.*		*Per ct.*	*Per cent.*
Mines, forges, and salt-works	15.2	1.8	Textile industries	17.2	48.1
Working in stone and earth	13.6	4.5	Paper and leather factories	5.1	8.1
Metal-working	12.8	5.5	Carving and working on wood	4.6	2.1
Machines, instruments, and apparatus	11.6	1.6	Foods and articles of luxury	9.7	18.7
Chemical industry	1.4	1.5	Making and cleaning clothing	1.8	8.1
Forestal side products, lighting stuffs, fats, oils, and varnish	0.8	0.5	Polygraphical establishments	4.6	2.6
			Other branches	2.1	1.9

The manner in which young persons are employed in the factories is said to be suited to their age and capacity, but the manner in which children are employed is reported as improper sometimes.

In some of the districts in the northern part of Germany children twelve to fourteen years old are employed in the brick-kilns where the work is unsuitable to their strength.

In the Minden-Münster inspection district there were 671 children and young persons employed in the textile factories against 761 in 1884, and 2,079 in the cigar factories in 1886 against 1,980 in 1884. Of the latter, 1,200 in 1886 were less than fourteen years old.

The Prussian mine officials in their report say that in the iron-ore and bituminous marl-slate mines, and in part also in the coal mines, there has been a less employment of young persons than formerly, due to industrial depression, and to the fact that mining companies are less disposed to take young persons into their employ on account of the sharp control and regulations of the Government respecting them. In Saxe-Weimar the employment of young persons has been steadily on the decrease since 1880, when the year 1882 is excepted. In 1880 there were 743 employed in its factories; in 1886 but 533. The majority of the manufacturers of this state are doing away with the employment of young persons, because of the control by the Government to which they are subjected.

The inspector for the inspection district of Lower Bavaria, Upper Palatinate, and Regensburg says he found only an insignificant number of children in the factories, and that a number of manufacturers say they will take no children under fourteen in future, because the law provides that they shall not work longer than six hours a day.

Similar is the report from the Bautzen district, in Saxony, and from Mecklenburg-Schwerin.

From the district of Upper Bavaria, Suabia, and Neuburg the report is made that the number of young persons employed has not materially increased on the whole since 1884, but that that of the children has increased somewhat. In the chemical works and textile factories a decrease in the number of children, however, has occurred.

In the district known as the Bavarian Palatinate, Lower Franconia, and Aschaffenburg there were more young persons and children employed in 1886 than in 1884. This was due to various causes, one of them being an increased employment of laboring people generally, and another the pressure of parents for the employment of their children in the factories. The manufacturers take children unwillingly into their employ on account of the laws governing their employment, but take them after they have been to school to the proper age to gratify their parents, who do not know what to do with them while they are away from them at work in the factories. The inspector for the district says it is doubtful if these children are employed only six hours a day in accordance with the law, but that it is hard to prove the contrary.

In the Dresden district there was an increased employment of boys to a considerale extent, but a decrease in the number of girls. The decrease took place principally in the factories making paper, leather, foods, and wearing apparel, due, in part, to industrial depression and partly to a disposition to do away with the employment of women in these industries. Even in the textile establishments, although there was an increased number of hands employed in general, less girls were employed. The youths are taken to a large extent in the establishments working in earth and stone, in the machine-shops, in the tobacco factories, in the breweries, and in the chocolate factories, as apprentices.

In only few of the inspection districts did so large an increased employment of young persons take place as in those of Chemnitz and Zwickau, in Saxony. New industries, especially brick-kilns and slaughter-houses, called for children; and the textile factories, which had a good year, took in children more and more.

The Leipsic district showed a decrease in the number of children employed, especially of females, although there was an increased employment of workmen in general. In this district, in only 138 establishments, or 7.1 per cent. of the whole number of establishments, were children employed. The whole number of children employed amounted to 894, or 7.1 per cent. of the whole number of laborers in the factories, against 1.8 per cent. in 1884. Only in the spinning-mills and woolen-yarn factories, in the glove factories, in the paper-goods factories, in the hosiery factories, and printing mills did any increased employment of children worthy of mention come to pass, while in the other industries the number employed remained unchanged or met with a diminution. The inspector for this district does not think that the regulations regarding child labor need to be any stricter for his district. In the factories, he says, the children are better off than they would be working at home. In the last ten years the factories erected are much better lighted and ventilated than the old affairs, and are far better to work in than small, badly-aired workingmen's dwellings; and besides, what the children earn helps their families to live better than they otherwise would. It is said of the Meissen inspection district that it has, relatively speaking,

more children in the factories than any other. The year 1886 showed an increased employment of male children over that of 1884, but a lessened employment of females. The most of the young people are in the textile and cigar factories. With respect to the latter, the inspector for the district says that the boys making cigars, after leaving school, usually learn some other trade, as the cigar factories generally have enough adult workmen at command.

Like the Prussian, the Saxon mining districts manifested a decreased employment of young persons fourteen to sixteen years old, while there was an increased employment of children twelve to fourteen years of age.

For the Wurtemburg districts, two in number, there was an increased employment of children reported. Textiles, paper, food-making, and clothing-making factories show comparatively the greatest increases.

Baden is noted for a large employment of children in its factories. The year 1886 showed an increased employment of both young persons and children over that of 1884, but a greater increase in the case of the former than in that of the latter; but the year 1874 was the banner year in the employment of young people and children, of whom there were 45 per cent. less employed in 1886 than in 1874. Compared to other parts of the Empire the rate of children employed in the factories of the Grand Duchy of Baden is very high. The cigar factories have 60 per cent. of all the children employed.

Respecting Saxe-Meiningen the report is that there was a less number of young people but a greater number of children employed in 1886 than in 1884. They are employed in the pocket-book, porcelain, chocolate, candy, and cigar factories, in a suitable manner, according to report. In the mines no children are used.

Saxe-Altenburg shows a larger number of children employed compared to the whole number of young folks in the factories. There was an increased employment of children in 1886 over 1884, but a diminished employment to a slight extent of young people; but the increase in the number of adult workmen employed was proportionately higher, and a lessened employment, comparatively speaking, of young people and children is to be recorded. In 1880 15.9 per cent. of all the hands employed were under sixteen years of age, but in 1886 only 9.8 per cent.

Bremen noted a decreased employment of young persons of both sexes, especially of children. During the year of report only 6 children were found still employed.

Hamburg showed a further decrease of 13 per cent. in the number of young people employed. In 1885 there were 698 at work, in 1886 but 608, among them 27 boys twelve to fourteen years old. No girls under fourteen were employed. The boys under fourteen were chiefly in the polygraphical establishments, with a few in the tobacco factories. Of the boys fourteen to sixteen years of age one-third were at work on metals and machine-making, one-fourth in the polygraphical establishments, and not an inconsiderable part in the factories making foods and luxuries.

PROTECTION OF YOUNG PEOPLE.

The execution of the laws and regulations of the Empire regarding the employment of young persons and children in the factories is said to be variously done in the different parts of the land. In certain districts, as in those of Berlin-Charlottenburg, Hamburg and

Potsdam-Frankfort-on-the-Oder, where the factory inspectors are energetically and well supported by the police authorities, satisfactory and even gratifying results are achieved. In Berlin every establishment in which young people are employed is inspected at least once a month. At Hamburg1485 inspections were made altogether during the year. From the districts, too, of Magdeburg, Schleswig-Holstein, Hanover, Dresden, Neckar, Jaget, and Danube section, Hesse, Saxe Weimer, Coburg-Gotha, Schwarzburg-Sondershausen, the two Reusses, and Bremen, the reports of the inspectors are either satisfactory or give no cause for special complaint. Some other reports say the police are showing more activity than formerly, while still other reports are less satisfactory. For the great mass of districts it is affirmed that an improvement in the observance of the factory regulations respecting young people is taking place.

The Kingdom of Saxony shows an increasing violation of the factory regulations, as follows:

1883	618
1884	577
1885	1,088
1886	1,499

Almost the half of the violations in 1886 occurred in the textile factories, that is, 681; but the great body of them were for formal offenses, and not material ones. So is it with regard to other parts of the Empire; the violations of the regulations reported are mostly of a formal character, and not of any gravity.

Both in the Kingdom of Saxony and other parts of Germany, cases of employment of children under twelve years of age were met with, which is contrary to the regulations of the Empire, which forbid the use in the factories of children less than twelve years old. The inspector for the Dusseldorf district thinks that the factory regulations should be so amended as to forbid not only the employment but the very presence of children in factories, and the like. He says:

> I frequently met in grinding-works, weaving-mills, etc., of small size, children four to twelve years old, which, it was said, were not at work, but only there under the eye of parents and brothers and sisters, but only in a few cases was I able to establish the fact that the children had been working, although their hands, dirtied by the stuff on which they had been working, gave evidence of work.

In the Cologne-Coblenz district its inspector discovered that children under twelve years of age had been used to break up stone at the basalt quarries on the Rhine, working from 4 to 7 and even to 8 o'clock in the evening on regular school days, and on afternoons when there was no school still longer, but unfortunately the industrial regulations of the Empire do not cover this employment.

Regarding the Plouen district it is said that children work entirely too much at home in many instances, and that their teachers complain that they suffer therefrom in both mental and physical development. Not a few cases are known of children but seven, or hardly seven, years old working ten hours a day beside the time spent at school, and as they are at work at home the factory regulations do not reach them.

The complaint is made that in the textile factories of Saxony the hours of labor and resting pauses fixed by the imperial regulations are often disregarded. The young people when questioned on the subject do not give true answers oftentimes, because they wish to work beyond the limits fixed by the Government in order to get better wages.

In the report of the inspector of the Neckar-Jagst and Danube section, attention is called to the conditions created by allowing the spinning-mills there to employ for eleven hours a day young persons fourteen to sixteen years old, as the numerous working force in these establishments, which are mostly run by water-power, live at long distances from their places of work. He says:

> The time of labor is generally from 6 to 12 in the morning, and from 1 to 7 in the afternoon. Numerous young laborers, especially girls, must in consequence get up at 5 o'clock in the morning, at all seasons of the year and in all kinds of weather, and not get back home until 8 o'clock at night. Their midday meal is a miserable one, and their chief meal is supposed to be taken at night after they have got back home. As a physician assured me, these poor creatures sometimes reach home so exhausted that sleep gets the better of appetite at the last meal; and just in the years of growth and physical development their nourishment remains a defective one.

By the factory regulations of the Empire young people are not allowed to be employed in hatchel or combing rooms, nor even permitted to remain there while work is going on. Young persons 14 to 16 years old who are used solely as assistants at the spinning machines are allowed to work 11 hours a day, but not longer, when, before entering on the employment, a certificate is presented to the employer from a physician to the effect that the holder is physically able to stand the labor without injury to health. But some of the holders of these certificates think that it entitles them to work in other branches of industry the same length of time, and when they get out of the textile factories present it to manufacturers in other kinds of business, who are misled by it into employing the holders.

Almost no complaint is said to have been made on the score of the children in the factories being deprived of elementary educational advantages.

LAWS ON EMPLOYMENT OF CHILDREN.

The regulations governing the employment of young persons and children in the German Empire are in brief as follows: Children under 12 years of age cannot be employed, and those under 14 are not to labor more than 6 hours a day. Children who have not been to school the required length of time can be used in the factories only when 3 hours a day of school instruction are guarantied them. Young persons from 14 to 16 years old are not to labor more than 10 hours a day; they cannot begin work before 5.30 a. m., nor continue at it later than 8.30 p. m., and must be given regular resting pauses: this to be for children half an hour; for young persons of 12 to 14, one hour at midday, as well as at least half an hour in the forenoon and half an hour in the afternoon. No work is to be undertaken during the pauses. They must be allowed all Sundays and holidays. No child is to be taken who has not a labor-card, bearing his name, date of birth, religion, name of parents or guardian, and arrangements stated for receiving school instruction, which card is to be held by his employer, shown to the police whenever requested, and given up when the employment ceases. Before taking any young person into his employ the manufacturer has to give the police notice of his intention to do so, in writing, naming the factory, the day on which the child or young person is to commence work, the length of time he is to work, and the pauses he is to enjoy, as well as the character of the work on which he is to be put. In every factory a list has to be hung up in a conspicuous place of the young persons employed, with the commencement and termination of their periods of labor, and the pauses for rest to which they are entitled, as well as

the regulations governing employment. The Bundesrath can forbid the employment of young persons at work which is injurious to health, or permit it with certain conditions; the Bundesrath can make exceptions from a strict observance of the regulations as to hours of work in the case of spinning-mills and factories which are run without letting the fires go down, or which on account of their character have regular day and night work, as well as with respect to such factories as cannot divide their work up into regular periods of similar length, or of such a nature that they can be run only at certain seasons of the year, but in no case is the duration of time employed to exceed 36 hours for children and 60 for young persons a week; in spinning-mills 66 hours. These exceptions the Bundesrath is to lay before the Reichstag. The regulations of the Empire governing the employment of young perons in rolling-mills, glass-works, and coal mines I omit.

ACCIDENTS.

A good deal of attention has always been paid by the inspectors to the subject of accidents among factory operatives. For the year under consideration no general statistics were gotten up, but some few district reports are published; and as under the recent law of the Empire providing for the organization of the factory operatives of the country into unions for the purpose of affording relief to such of their members as become disabled by accident, and to their families, it is provided that the statistics gathered in relation to accidents shall be submitted to the disposition of the Imperial Insurance Office, created by the law. The statistics furnished by the factory inspectors are now but briefly alluded to in the factory-report publication.

In the Berlin-Charlottenburg district there were 2,394 cases of accident reported. Of these 50.7 per cent. were such as could not very well have been provided against, and for which neither the employer nor the employed could be made answerable; 38.4 per cent. were due to carelessness or clumsiness on the part of the workmen; 4.2 per cent. owing to the violation of instructions by workmen; 0.4 per cent. through the use of unsuitable clothing; 1.6 per cent. to the carelessness and frivolity of others; 0.2 per cent. to joking, scuffling, and drunkenness among the workmen; 1.4 per cent. to the misuse or nonuse of the means of safety provided, and 3.1 per cent. only to the lack of protections against accidents.

For the Potsdam-Frankfort-on-the-Oder district there were 1,036 cases of accident reported, of which 40, or 3.8 per cent., resulted in death; 110, or 10½ per cent., in permanent disqualification for work; 868, or 83.8 per cent., only temporarily injured, and 18, or 1.9 per cent., uncertain in result. Of those injured 956, or 92.3 per cent., were males, and 80, or 7.7 per cent., females; and 973, or 93.9 per cent., adults, and 63, or 6.1 per cent. were young persons and children.

From the Treves-Aix-la-Chapelle district the report was 2,014 cases of accident, of which 325, or 16.1 per cent., were from bending and burning; 522, or 25.9 per cent., from touching the machinery and operating appliances; 688, or 34.2 per cent., from falling or being thrown from pieces of work; 344, or 17.1 per cent., from jumping from pieces of work, and 135, or 6.7 per cent., in other ways.

To what extent the various branches of industry participate in the accidents that occur is thought to receive a good illustration in the

statistics of the governmental districts of Aix-la-Chapelle and Treves. In the Aix-la-Chapelle district there were, among 12,754 hands employed in the foundries and forges, 427 cases of accident, some of which were of a very serious nature; while among 19,883 hands at work in the textile factories there were but 173 cases of accident, mostly of a light character. In the Treves district, of 1,157 cases of accident, 934 happened in the foundries and metal works.

A large number of accidents are caused by the careless or clumsy use and handling of buzz-saws and leather belting in connection with machinery.

According to the factory regulations of the German Empire every manufacturer is obliged to provide and maintain all such precautions against danger to the lives and health of his employés as the character of his business may call for; and it is one of the chief duties of the factory inspectors to see and insist that the factories are supplied with the necessary arrangements to protect their employés from accident and disease. Just what precautions shall be taken by the different kinds of factories is fixed by the Bundesrath of the Empire, or by the officials of the various states, according to the laws thereof.

As mentioned above, the factory employés in Germany are all now organized into clubs or unions for the purpose of guaranteeing them and their families assistance when injured or killed by accident; that is, those employed on work where there is any danger of injury to life or limb. They are compelled by law to contribute, at certain periods, small amounts to common funds, to which also their employers must contribute, and from these funds the relief is afforded. The substance of this law has already been communicated to the Department by various consuls, including myself. There is also a law under which the factory operatives are banded together in societies for the purpose of supporting one another and their families when overtaken by sickness. This law I communicated to the Department at some length in July, 1884. It is also proposed to group these men together in such a way that when they become too old to work any longer a certain fixed income shall be vouchsafed to them for the rest of their days. Thus is the Government providing for the welfare of its working people.

INFLUENCES INJURIOUS TO HEALTH.

Illumination by electricity is a great boon to the factory workmen, and is more and more being introduced, especially in establishments where all fire is dangerous. It not only enables the factory operative to see better, and consequently to work better, but has a very favorable effect upon the air in factories, because it throws off less heat. The use, too, of steam, instead of furnace heat, improves the air, and is being more and more employed. Improved means of ventilation are also taking place, and the factory inspectors use their good offices to bring it about as much as possible. Some of the workmen however, are afraid of fresh air, and do all they can to prevent its entrance into the rooms where they work.

The factory inspectors are also endeavoring to have the proper relations exist between the size of the working rooms and the number of workers in them. The inspector for the Dresden district thinks

that, with good ventilation, 5 cubic meters of space to each workman ought to be sufficient. The inspector for the Breslau-Leignitz district is of the same opinion, but thinks that in establishments where there is an unusually strong development of dust and heat, the space should be 6 to 7 cubic meters, with ceilings 4 meters high.

One of the very evil conditions frequently met with is the proximity of privies to the work-rooms, fouling the air for them, and making a pest of it in some instances. When the inspectors come across them they order their immediate disinfection and prompt removal.

Where grinding and polishing are done much injury to health results, as a rule. Many of the establishments in which this work is done are poorly ventilated.

The spinning mills are all the time making progress in means for ventilation and removal of dust.

Cleaning and sorting of rags is an occupation very prejudicial to health, but this is being done under better conditions than formerly.

Workmen very often object to the means adopted to insure them from injury to health or body, and will not use the appliances provided. They stop up openings that have been made to ventilate the rooms in which they work, and will not use respirators, and the like, although made aware of the beneficence of them.

The laws of the Empire are now understood to be quite stringent regarding the match factories, in consequence of which quite a number of them have been compelled to be thoroughly overhauled, or entirely rebuilt. No case of necrosis from the handling of phosphorus was reported during the year.

The danger of poison from making lead colors and sugar of lead is now said to be reduced to a minimum through new and sharp regulations, issued in 1886.

ECONOMICAL AND MORAL CONDITIONS.

Viewed economically, the condition of the laboring population is said to have been satisfactory in 1886 on the whole, although not so in some parts of the Empire. Many reports announce an improvement. The prices of the necessaries of life remained, in general, the same, although, in a few instances, rises and falls took place.

In one respect, at least, is the working-man, unfortunately, badly off, and that is in the lack, yea, the great lack, of suitable dwellings. The poorer people live wretchedly crowded together, and have to pay out a large percentage of their earnings for unfit and disgraceful habitations. Something is being done to remedy this evil, but it is so great and far-reaching, that in years a proper reform will not be accomplished. The chief obstacle in the way of a thorough reform in this matter is the fact that it does not pay capital to put up houses for the working people. A sad tale could be rehearsed on this subject, and some day soon I expect to relate it. The working-man who has two rooms all to himself and family seems to be a fortunate individual.

In Bavaria last year there were 24 factories which had dwelling-houses for the whole or a part of their working force, which they let them occupy either free of rent or for a small return. A metal factory, very near Nuremburg, let its employés have quarters for 41

marks ($10) a year; a paper factory not far from the same city, its employés for 28 marks ($7); a cotton-spinning mill in Erlangen, its employés for 72 marks ($12); and a similar establishment at Hof, its employés quarters for 52 marks ($13).

How rents ordinarily run in Bavaria for small tenements will be seen from the following examples: The price of a tenement consisting, as a rule, of one room and a chamber, with a kitchen and a share of the room in the loft, and generally, too, some share in the cellar, amounts, in Nuremburg, to 120 to 160 marks ($30 to $40); in Schniegling, near Nuremburg, to 80 to 100 marks ($20 to $25); in Höfen, near Nuremburg, to 180 marks ($45); in Erlangen, to 100 marks ($25); in Schwabach, to 70 to 100 marks ($17.50 to $25); in Rothenburg, to 58 to 80 marks ($14.50 to $20); in Roth, to 80 to 100 marks ($20 to $25); in Lauf, to 50 to 60 marks ($12.50 to $15); in Fürth, to 150 to 170 marks ($37.50 to $42.50); in Schwarzenbach, to 42 to 54 marks ($10.50 to $13.50); and in Forchheim, to 80 to 100 marks ($20 to $25).

In Leipsic, in Saxony, there is a great scarcity of suitable and healthy tenements for the working people, and the rents they have to pay are out of all proportion to the wages they receive. In the case of the poorer people the rents paid amount up to 33 per cent. of their incomes. The result is that these unfortunate people, in order to meet their rents, let out parts of their already crowded rooms to subtenants, or to night lodgers.

The factory women of Baden are said to be much more poorly fed than the men. Very many of them have at their different meals only some bad coffee, with bread or potatoes, which is only very seldom observed among the men. This fearfully poor fare of the women is said to be due in part to the very small wages they receive, partly to their love of cheap finery, for which they use their money, especially the young girls, and partly to their lack of domestic skill and economical prudence, which characterizes them all as a class. The men suffer less in this way, especially in their food, because they either get a better and nourishing meal once a day at least from their homes or in the eating-houses.

A good deal of complaint is made by many reports of the immoderate use of spirituous liquors by the working-men, and of the extent to which they frequent the drinking saloons. The inspector for Pomerania sees in this evil the chief cause of the woes of the laboring population, both in the cities and in the country, and every means, he says, should be used to banish brandy from their midst. Regarding some quarries in a place in his district the inspector of the Minden-Münster district says that some of the quarry-men there drink from 1½ to 2 quarts of brandy a day. In order to check the evil the names of the men coming drunk from the quarries were put on the toper list; but this did not help the matter at all, for at the last accounts the men were drawing brandy by the barrel from the neighboring distilleries.

To combat the drink evil some few coffee-houses are being established. A circular of the "Hessian Union against the Misuse of Spirituous Liquors," addressed to manufacturers in particular, says that it is not alone sufficient to prohibit the use of brandy by their men, but that steps should be taken to remove the desire of the working-men for liquor by providing them with proper nourishment and harmless drinks, of which coffee is regarded as the most suit-

able; and that the factories should arrange to have their work people supplied several times a day with good coffee for little money. The working-men easily take to this arrangement, and it is said to lessen drunkenness among them.

Employers are said to be taking more interest in the well-being of their workmen than formerly. It has been the custom for the manufacturers to treat all humane efforts for the elevation of the working-man and amelioration of his lot in a rather cool manner as a general thing, but a material change in this particular is claimed to have recently taken place. It is being recognized that the comfort of the operatives in the factories, the interest they take in their work, and the discipline observed, have a great deal to do with the quality of the goods and consequent standing of the factory in the commercial world, for when the employé perceives that his superior takes an interest in him, and seeks to make his lot and surroundings congenial to him, he exhibits a disposition to return the favor by producing better work.

A number of inspectors report benevolent provisions made by industrial establishments for the relief of their hands when they become too old to work or for the assistance of their widows and children when death removes them from this sphere of activity. By the great mass of factories is nothing of this kind done, but the number of those which do make provisions of the kind is not inconsiderable.

In a Dresden factory the aged workmen, when they become too weak to labor, are pensioned off, as it were, on half pay. In another factory, in Meissen, the old hands whose strength has forsaken them have their full wages continued to them and their taxes paid. A Leipsic factory gives its employés 10 marks ($2.50) the first Christmas they are in its employ, to which is added 5 marks ($1.25) each year that they remain in its employ. Another factory, in the Black Forest, has the lives of all its master-workmen insured for 2,000 marks ($500), and those of the ordinary workmen insured for 1,000 ($250).

A good many factories have savings-banks for their people, and the factory inspectors encourage the creation of such banks as much as possible. On this subject one of the inspectors thus expresses himself:

> My endeavor is constantly directed to the erection of factory savings-banks. The wages they get permit the working-men very well to lay by weekly a "saved penny." I have often observed how the working-man gives up social democratic opinions when he comes into the possession of a small property, let it be ever so small.

In some factories the sums deposited are voluntarily made, in others it is obligatory. Sometimes the employers make deposits to the credit of their men, or in making presents on particular or festive occasions do so by presenting bank-books with a deposit already made.

Here is an instance of a bank in a cigar factory, in which the factory hands are compelled to make deposits:

> Every female operative is constrained to put 10 pfennigs (2½ cents) a week in the savings-bank, which the proprietor of the factory takes and places with the savings-bank of the city of Posen. Although the compulsory deposit is only 10 pfennigs the actual voluntary deposit is much greater. By an inspection of the lists of depositors I have found that deposits reached up to 1.50 marks (37½ cents), and that three women had regularly a monthly deposit of 4 to 6 marks ($1 to $1.50) to show for themselves. How the disposition to save, first by saving, attains unto larger proportions is exhibited by this bank in a very plain manner. It was begun in 1878,

with 35 hands, and originally was at the same time an invalid fund; but since 1882 has been only a pure savings-bank. The amounts deposited amounted—

On the 1st of January—	Amount.		No. of hands depositing.
	Marks.	*Dollars.*	
1879	64.00	16	35
1880	97.40	24	35
1881	127.90	32	52
1882	166.50	42	47
1883	368.60	92	47
1884	673.90	168	45
1885	1,098.00	273	41
1886	1,295.70	324	53

There has thus been an increase of deposits from year to year. The above-mentioned three women had deposits of 108 marks, 136 marks, and 157 marks ($27, $34, and $39), which are deposits, under the condition of things here, which must be considered as quite considerable.

In Franconia are two factories which make their people save by deducting 2 per cent. of their wages whenever they are paid off, which is held until Christmas time, when the whole deduction for the year, with 2 marks (50 cents) additional, is handed back to the workmen.

There is a savings-bank for children in Wurzen, established in 1879, which has met with noteworthy success. Its object is to make it easy for the poor with children to stand the not inconsiderable expenses attending the confirmation by the church of their children, by having the children make small deposits during the period that they are at school. The smallest deposit is 10 pfennigs (2½ cents), and at the close of 1885 there were 745 contributors to the bank, with a total deposit of 68,000 marks ($17,000). Withdrawals of the deposits, upon which 3 per cent. interest is paid, are allowed only when removals from the town, deaths, and confirmations of the children occur. Only 1,800 marks ($450) are reported as having been drawn out.

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UNITED STATES COMMERCIAL AGENCY,
Mayence, November 7, 1887.

LOSS TO GERMAN INDUSTRY THROUGH EMIGRATION.

REPORT OF CONSUL-GENERAL MUELLER.

The following is a sketch of a recent lecture on the subject of emigration by Dr. K. Becker, director of the Imperial bureau of statistics. The address is shortly to appear in the yearly ordinance register (Gesetzbuch), and is supposed to contain an exposé of the views entertained in official circles upon a question which of late has assumed in the United States so prominent a position in the public mind, and in the discussion of national and economic politics.

Germany, during the last half century, has lost an average number of 100,000 people annually, and from present appearances the current gliding away will be maintained; consequently no country in Europe, with the exception of Ireland which is laboring under exceptional circumstances, is so greatly affected by emigration as

Germany, and none is more interested to calculate upon the effects, injurious or beneficial, which emigration is necessarily bound to exercise upon its national growth and industrial progress.

EARLY VIEWS ON EMIGRATION.

So little were the laws of population and political economy understood up to a time not very far past, that emigration was generally looked upon with indifference if not with satisfaction. Laboring under the idea of so-called overpopulation, people generally were inclined to believe that emigration was beneficent, and affording relief to the country emigrated from; but these erroneous conceptions of the effects of emigration have undergone a radical change, and Dr. Becker's views, that Germany's large emigration is causing a heavy loss to the industry of that country, will soon generally be indorsed as sound and correct. Inasmuch as the United States are the recipients and beneficiaries of German emigration, with trifling exception, it is logical to say that the loss to German industry through emigration is a "gain" to America's industry and American progress from immigration; a gain so great and manifold that it forbids its reduction into dollars and cents.

The following is the sketch of Dr. Becker's lecture:

Up to this time the idea has been universally cherished that if a value in money per capita is set over against the list of emigrants, an enormous amount of money is drawn out of the country every year, and this apart from the enormous amounts of money carried away in hard cash by the emigrants to their new homes.

Against this supposition Rumelin and Herzog have recently entered denial, or at least protested that it is not wholly true. Rumelin in his article, "Education of the People," in Schönberg's "Handbook of Political Economy," lays down the claim that the population not only suffers in a diminution of numbers, but a relatively greater loss in the aggregate power of labor and protection, this through the sex and age of the emigrants. While, on the other hand, the customary and popular theory that each man represents a money value in so far as he is still able to earn, and that because millions of emigrants leave a country billions in actual money value are lost to one country and presented to another, is to be classed among those misleading or only half-true modern economic theories. Herzog, in an essay published in the 1885 Schmollerscher year-book concerning the winnings to the United States through emigration and losses to Germany, takes the same position. Both authors, after setting the profit in one side of the scales over against the loss in the other, find that the latter is by no means so great as was supposed or as at first appears. A similar view has been very recently entertained and expressed by Mohl and by Leroy-Beaulieu. Becker agrees with Rumelin and Herzog so far as they take issue with the method of appraising the capital value of the emigrant, yet he goes on to say such a valuation is in principle not impracticable. Becker claims that the national economic worth of the emigrant lies in the amount by which his ability—productive capacity—exceeds his consumption; and he fails to see why this surplus should not be estimated as a grand total in a money value at least, if not on single individuals, upon the whole body, and then by means of an average upon each part. Such a calculation is not only allowable, but useful, because by this method, by this simple and common way of expressing values, people may

more easily get an idea of the greatness of the loss than in any other way.

To prove the loss in numbers to a population through emigration and to find also the surplus of emigration to immigration, a comparison of the amounts representing the increase or decrease of a population between two censuses is the surest with the surplus of births over deaths, or *vice versa*. The difference expresses the movement of emigration. For the German Empire, according to Becker, there has been a loss during fourteen years, from December 1, 1871, to December 1, 1885, of 1,680,000 souls, a yearly average of 120,000. This loss has been very different at different census periods. From 1871 to 1875 the average was 80,000; 1875 to 1881, 76,000; 1880 to 1885, 200,000, more than ever before. From 1841 to 1850 the average had been 57,000; 1851 to 1860, 90,000; 1861 to 1870, 89,000. Previous to 1841 the average was considerably smaller. The above figures and the very considerable increase during the years 1885 to 1886 (1881 to 1884, yearly average, 186,700; 1885, 110,028; 1886, 79,875) lead Becker to assume that the enormous flow of emigrants in the last period is not a sign of an ever widening and, to Germany, unfavorable emigration movement, but that it is to be regarded as an unusual high wave of the emigration fever which at that time seized upon the German people in passing. In the immediate future, according to Becker, the yearly average will not exceed 100,000, or 2 to 2½ to the 1,000 of the population. This loss is caused by emigration to lands beyond the sea, from which we receive very very small compensation. From the returns made by German emigrant ports 1,400,000 persons were registered as emigrants to lands beyond the sea during the fourteen years from 1871 to 1885. Of these, 1,300,000 went to the United States, 30,000 to Brazil, 10,000 to the Argentine Republic, and 14,000 to Australia, etc. These figures are too small, inasmuch as they do not contain the numbers who left by English and Dutch ports.

The statistics of the United States give the number of German emigrants 1,600,000 instead of 1,330,000. Becker says this sum is too large and that the correct estimate lies somewhere between. Besides this loss by emigration, Germany loses in the movement of her citizens to European countries, but in so limited a number that the loss bears no weight to that caused by emigration beyond the sea. It is not so much from the numbers of our emigrants as from their quality that our chief loss results. The list of emigrants is made up principally of males in the best working period and condition of life. From the results and proofs taken from the census returns of the five years between 1876 to 1880 it appears that 58 per cent. of the emigrants were males, while in the population there was about equal number of both sexes. It is further shown, notwithstanding the limiting regulations in regard to duty in the active and reserve military, 28 per cent. of all the emigrants were males ranging in ages from 15 to 25 years, further that 25 per cent. were females ranging in ages from 20 to 35 years, and that according to the census of 1880 these quotas of persons (referred to) make up only about 9 to 12½ to the 1,000 of the entire population. This loss is offset by the return of a small number of persons ranging in years above 70, generally persons returning to die in the old fatherland.

If we compare Germany's loss by emigration with that of other lands, taking into consideration the conditions of the nine years from 1872 to 1880 or some period near this time. and fair to the country

with which we make comparison, we will find that no country except Great Britain has had greater losses from emigration than Germany. Russia is left out of the calculation, since no reliable sources of information are attainable. The greatest loss of all, however, falls upon Ireland, the first emigrant land of the world, where the yearly average figures up 12½ to 1,000 of the population against Germany's 1.9 to the 1,000, and where the population sunk from 8,000,000 to 5,000,000 between the years 1841 and 1881. Great Britain alone suffers a loss yearly of only 1 to the 1,000 during the last decade, a trifle more than half the German loss (1.9). In the Austro-Hungarian Empire the loss reached ¾ of 1 to the 1,000 yearly, Italy 1½, while France gained 1½ per 1,000. Of the smaller states, Sweden and Norway especially show a much greater loss than Germany. Denmark's loss about equals, while the Netherlands' and Belgium's losses run between those of Germany. If Germany is to be classed among the nations suffering greatly from emigration, still she ranks among those which show an encouraging growth in population. During the period from which we took figures for emigration Germany's increase in population averaged 10¾ per cent. to the 1,000. Among the nations cited, Great Britain (Ireland of course excepted), the Netherlands, and Denmark alone show greater accessions; Belgium and Sweden about equal Germany; Austria beyond the Leitha, Hungary, Italy, Switzerland, Norway, and above all France, with its average of 4½ to the 1,000, fell far behind. The cause of Germany's increase is to be found in the great number of births and moderate death rate. Of the above-named foreign states Austria this side of the Leitha and Hungary had more births in proportion to the population than Germany. All the others less; France least of all. Germany's average through the years cited was 39 to 40 births to the 1,000 inhabitants; France only 25 to 26. Deaths, the former 26 to 27, the latter 22 to 30. The naturally resulting increase of population gives Germany 12 to 13 to the 1,000 and France 3 to 4. Hence there is little cause just yet to get excited over the decrease in population caused by emigration. But the stream of emigration, *consisting as it does for the most part of males*, and of persons *from 15 to 30* years of age, works a *very* perceptible influence on population, leaving relatively more grown persons and children than would result were it affected by births and deaths alone. Emigration and immigration are responsible for the fact that the German population presents an essentially different picture as regards the component parts in the matter of age and sex than France, for instance. To 1,000 Germans you find only 490 males, while in France there are 560. To Germany's 356 children to the 1,000 under fifteen years of age, France puts 267. Germany has 565, France 610 persons to the 1,000 between the ages of 15 to 60. But, if France has, and she has according to these figures, relatively a larger number of men than Germany, still her number of men from 25 to 30 years is smaller. In 1880 Germany had 5,200,000 men between 25 and 30. France in 1881 only 4,270,000. Let us turn our attention now to the amount of money carried away by the emigrants. Becker says that the emigrant to lands beyond the sea takes on an average 350 marks each. For 100,000 emigrants yearly that makes 35,000,000 marks. In order to understand better the effects of such a loss and to measure its influence on Germany's economies, it is necessary first to take a glance at Germany's aggregate wealth and income. The wealth represented by real estate (Grund und Boden) capital, including machinery, etc.,

175 milliard, is quoted at 175,000,000,000 marks. Becker gives each person in the German state from 3,000 to 4,000 marks.

Now, if the emigrant takes only 350 marks it shows that he belongs to the class who have very little. Becker claims that Germany's yearly increase in wealth amounts to some 3 per cent. or 5,000,000,000 total; this divided among the population gives 100 marks to each person. This increase in national wealth, however, is partially nominal, say one-half; even then there remains a tangible gain of 2½ milliards or 50 marks to each person in the Empire. According to Becker, estimates of the income were made in different ways in several of the states of the Empire with results rather much alike. According to these estimates the average income to each person is 400 marks, or for the whole Empire 18 to 19 milliards. Of this sum a yearly average of 12½ per cent. is put by and added to the nation's wealth. Now, if Becker's figures are correct, and he has no doubt they are, and from the people's income 2,500,000,000 marks are put by for a rainy day, the 35,000,000 carried out of the country every year by emigrants can not be regarded of so much consequence after all. The outlook is much more critical when you come to regard the capital value which the emigrant represents to those who remain at home. According to Becker this value must be placed at from 800 to 900 marks to each person, or yearly, 100,000 emigrants, to 90,000,000 marks. If these figures excite no fear they are still very unpleasant to contemplate, and if in the next census period 200,000 are to leave our ports yearly instead of 100,000 the loss doubles and the matter assumes alarming features.

Further, Becker discusses whether Germany does not suffer from over population, and asks whether the emigration should not be regarded as a healthy blood-letting (Aderlass). To this question a negative answer is given. At most, says Becker, a relative over population might be spoken of, that is, in regard to the existing condition of national economy, but this he regards as in no way unchangeable.

Becker then goes on to discuss the question whether Germany's loss through emigration is not covered by a profit realized through the commercial intercourse with those who have emigrated. He says he is not ready to assert, as has been done, that it is or would be a perfectly indifferent thing to Germany if the millions of Germans in the United States were replaced by English, Irish, French, and Russian emigrants. Becker is not ready to concede great value to commerce carried on with our emigrants as a factor in reducing our great economic loss. Judging this matter from the average result of comparisons made for several years, he is forced to conclude that France gets more out of commerce with the United States than Germany, and that even since 1872, the period at which Germany's great revival began, commerce between France and the United States has increased much faster than between Germany and the United States. Besides, France's exports to the United States exceed her imports from that country, while between Germany and the United States an opposite condition of affairs exists, the balance of trade being in America's favor. In the last few years, however, Germany has been gaining. Whether these gains are to continue is a question. In passing it may be remarked that the commercial relations existing between France and the United States are as profitable to the former country—sending, relatively speaking, no emigrants—as Germany's commercial interests with the same country, although Ger-

many sends hundreds of thousands of emigrants to the United States every year. Besides, Germany's profits from trade with the States are being essentially affected by the sharp and pressing competition growing up in the States themselves from competition with products formerly imported from the Fatherland; and this caused, in many instances, by the transfer of skilled German labor and its employment in the very branches in which they served at home. In conclusion, Becker interests himself with the means at hand to check the losses being occasioned through emigration. Here it interests us only to know those applicable to or essential in influencing the newly awakened movement in colonial politics. Becker can in no way become a warm advocate of sending emigrants to the provinces of southern Brazil, Rio Grande do Sul, and St. Catherine. He can find no guaranty that the fate of emigrants in those (the uncultured) regions, where each emigrant is thrown upon his own responsibility, etc., would not be much more than in the United States, with their orderly conditions, diversified methods of giving assistance, their great number of persons of German blood, in many instances related to the immigrants, their safety from war, and the rich future prospect opening up before them. Besides, the emigrants soon learn to depend upon the foreign government which can and will advance or retard their commercial interests with the old land in as far as she finds it of advantages to her own interests. This being so, Becker regards it as very doubtful whether Germans should encourage increased competition in south Brazilian provinces, especially in agricultural productions, rather than in the United State. Becker claims, however, that emigrants to the south Brazilian countries should not be met with increased and special difficulties, since we are threatened with competition from other foreigners taking up the land, but that they (our emigrants) should be put on pretty much the same basis as that of other countries. Becker feels that as long as the Parcesien treaty is no longer a cause of fear, the much-talked-of Hteydt'scher edict of 1859, which took back all concessions made by the Brazilian Government, it is to have no further (influence) consequence. The colonizing of our own territories, those as yet without a government—at least a recognized one—and politically bound to ourselves, would be much more profitable than the colonization of foreign states. Therefore our new colonial policy deserves only the friendliest greetings when looked at after a review of our emigration statistics. What form the matter will take eventually is uncertain, nor does Becker presume to determine. It is clear, however, that our colonies can serve as outlets to our streams of emigration only when they adapt themselves to European systems and cease to be simply plantations worked by aborigines in the interest of trade. Becker's best working factor to decrease the tide of emigration and losses resulting therefrom is the purchase (I suppose by Government for the people) of small land settlements in the northern and northeastern sections. He knows well that great difficulties stand in the way; that the thing can be much more easily talked about than done. Besides, the Russian border, like a half-wall, sets limits to industrial growth in those sections, which would be overcome only with great difficulty. A continued avoidance of the breaking up of large estates into small ones is not possible. A beginning has already been made. Finally, Becker is unable to discover that any enduring decrease in emigration is to be expected, the more so because the United States

offer so many advantages never to be found in the Fatherland. From appearance, the present strong current will be maintained, perhaps increased.

JACOB MUELLER,
Consul-General.

UNITED STATES CONSULATE,
Frankfort-on-the-Main, December 19, 1887.

GRAIN DUTIES IN GERMANY.

REPORT OF MINISTER PENDLETON.

I have the honor to send herewith the original and translation of the law now pending in the Reichstag.

The first reading of the bill and the discussion thereon will begin to-morrow.

An effort will be made to refer it to a committee, and though this will be stoutly resisted by the Government, and a large majority of the Reichstag supports the Government generally, the probability seems to be that the bill will be so referred.

To aid an intelligent comprehension of the bill, it may be said that the present customs duties are as follows:

	Marks.
Wheat	3.00
Rye	3.00
Oats	1.50
Buckwheat	1.00
Pod fruit	1.00
Barley	1.50
Rape and turnip seed	2.00
Linseed, cotton-seed, castor-bean seed, palm-seed, and coprah	Free
Poppy-seed, sesame, pod fruits, oil fruits	2.00
Maize, dari	1.00
Malt, malted barley, malted oats	3.00

So that the increase is nearly 100 per cent. The copy of the bill and the argument in its favor, laid before the Reichstag by the chancellor, is a fair example of the methods employed by the Government to carry its measure with the legislature. The argument, supported by statistics in any wise bearing on the subject, is very searching, and leaves little for the legislator to do but to study the paper before him.

I also inclose the copy and translation of a petition taken from the Norddeutsche Allgemeine Zeitung, praying for the passage of this law, forwarded to the chancellor by the Agricultural Union, which gives in brief the popular arguments in favor of the protection of agricultural interests by a prohibitive tariff on breadstuffs and meat provisions. On the other hand, the trades-unions of very many of the cities remonstrate strongly against the passage of any law whose tendency shall be to increase the price of the necessaries of life.

I also inclose an article from the same paper giving some account of meetings and efforts, pro and con, on this same general subject.

GEORGE H. PENDLETON,

UNITED STATES LEGATION,
Berlin, November 30, 1887.

[Translation.—Reichstag 7, legislative period 11, session 1887-'88.]

FRIEDRICHSRUHE, *November* 25, 1887.

In the name of His Majesty the Emperor, the undersigned has the honor to lay before the Reichstag for its constitutional decision the accompanying projêt of law concerning the change of customs duties, as the same has been adopted by the Bundesrath, together with the argument therefor.

The imperial chancellor, v. BISMARCK.

Projêt of a law concerning the change of customs duties.

We, William, by the grace of God German Emperor, King of Prussia, etc., decree that in the name of the Empire, with the consent of the Bundesrath and the Reichstag, as follows:

SECTION 1. The customs-tariff which was made public by the proclamation of May 24, 1885 (Imperial Laws, page 111), is changed in the following manner:

(1) In No. 9, grain and other products of agriculture, the sections *a*, *b*, @ *β*, *γ*, *δ*, *c*, *d*, *e*, and *f*, take the following form:

	Marks.
a Wheat	6.00
b @ Rye	6.00
B Oats	3.00
γ Buckwheat	2.00
δ Pod fruits	2.00
c Barley, per 100 kilograms	2.25
d e Rape and turnip seed, per 100 kilograms	3.00
B Linseed, cotton seed, castor-bean seed, palm seed, and kopra	Free.
γ Poppy, sesame, ground-nuts, and fruits yielding oil not elsewhere mentioned	2.00
e Maize and dari	2.00
f Malt (malted rye and malted oats), per 100 kilograms	4.00

(2) In No. 25, q, the duty is raised—
- *a* (Section 1, @). Starch-flour, powder starch, starch-paste, gums, arrow-root, sago, substitutes for sago, tapioca, from 9 to 14 marks.
- *b* Section 1. *B* Vermicelli, maccaroni, from 10 to 15 marks.
- *c* Section 2. Grindings of grain and pod fruits, namely, broken or shelled corn, barley grits, meal pastry, from 7.50 to 12 marks per 100 kilograms.

(3) The note to No. 25 *s*, rice for starch manufactures under control, 8 marks per 100 kilograms, is omitted.

(4) In No. 26, oil not elsewhere named, and fats, sections *b* and *c*, take the following form:
- *b* Eating-oils, as olive, poppy, sesame, ground-nuts, beech-nuts, sunflower oil in casks, rape-seed oil, and cotton-seed oil in casks, 10 marks.
- *c* Linseed oil in casks, olive, and cotton-seed oil in casks, sufficiently rectified, 4 marks per 100 kilograms.

SEC. 2. The new tariff duties fixed in section 1 for wheat, rye, oats, barley, maize, dari, malt (No. 9 @, *b* @, and *B c*, *e*, and *f*), and grindings of grain (No. 25 q. 2) are in force in conformity with the effect of section 9, section 2 of the "Zoll-Verein's law" of July 1, 1869 (Bunde's Laws, page 317), from and after November 26, 1887. The law goes into force on 1888.

[Translation.]

We are told that the German Peasants' Association has directed the following petition, with 5,414 signatures, out of 616 localities, to the chancellor, Prince Bismarck:

"After the harvests have been finished, we learn to our fright that grain has become considerably cheaper. We have already been obliged to sell the last three harvests each one even cheaper than its predecessor, and ask ourselves with anxiety what shall be the outcome. At the same time with the price of grain the price of potatoes has considerably fallen, and our hope that the new law for the taxation of brandy would help us seems, alas, to come to nought, as we hear that the distillers are absolutely without courage, and, because of the probable higher taxation, will

give up entirely the purchase of potatoes; and accordingly we would be obliged, in spite of the cheap price of grain, to cultivate still more grain. In our cost of cultivation and personal expense nothing more can be saved, and yet our receipts become smaller. We approach poverty slowly but surely. We are told that we should buy fertilizers in order to raise more bushels, to buy machines to save wages; but for this money is first needed, and, alas, we have none remaining. Besides, we can not discharge our workmen, for where shall they go? Shall they go into the factories of the cities, where they will become chiefly prolétaires, social democrats, and invalids. It is a cause of proud joy to the poorest tiller of the soil to be declared publicly healthy at the examinations, and we peasants are proud that very seldom one of our sons or workmen is unfit for a soldier.

"Even now we are not the working class of our country. Russians, Americans, and even East India peasants have taken our places; but who will take our places in the armies when we gradually become unfit for it? We rely confidently that your highness take counsel, and have a care that we may again become the working class of the Empire, as our forefathers have been for hundreds of years. We trust that your highness will intervene, not only for our sakes, but for the sake of the Empire, for your highness knows better than we that an empire which does not live on the products of its own land is always in a dangerous condition, because it is in an important manner dependent on foreign countries, and in times of war can easily be lost.

"We therefore pray that your highness will take measures to shut the door against all foreign grain and meat-stuffs for the present, or to make the importation so difficult by reason of increased taxation that cultivation of grain and the raising of cattle may again be remunerative with us, or that at least we shall be relieved by the amount of taxes from the burden of taxation.

"This would be useful not only to us peasants, but also to the inhabitants of the cities, for the wages of the inhabitants of the cities would rise, whilst bread and meat would probably be influenced as little in price as heretofore by the price of grain and provisions."

[Translation.]

In the matter of the increase of the grain duties, several meetings are to be recorded. The Peasant Union of West and East Prussia have petitioned the chancellor and the Reichstag for an increase of the duty on rye and wheat to 5 marks. A meeting of eighty-eight mill-owners and grain-dealers from Rhineland and Westphalia has resolved to-day to send a petition against the increase of the duties, and especially against the provision that the tax shall be increased per November 26. The former member of the Reichstag, Freiherr V. Schalcha, has sent an open letter to the New Prussian Gazette, addressed to Mr. Peter Reichensberger, as a reply to his pamphlet, "The common injuriousness of the proposed increase of grain duties."

Mr. V. Schalcha demands even considerably higher duties than the agricultural councillor has suggested.

ADOPTION OF THE "GRAIN DUTIES" BILL.

SUPPLEMENTARY REPORT BY MR. COLEMAN, SECRETARY OF LEGATION AT BERLIN.

Referring to Mr. Pendleton's dispatch of the 30th ultimo, transmitting the bill increasing the import duty on grain, etc., recently submitted by this Government to the Reichstag, I have the honor to inclose herewith, with translation, the bill as since adopted on its third reading, approved by the Bundesrath, and now only awaiting the signature of the Emperor to become a law.*

As adopted, the duty rates, compared with those contained in the law heretofore in force, published May 24, 1885, have received an

* The bill was signed by the Emperor on December 21, 1887, and proclaimed as a law in the Imperial Gazette of December 23, 1887.—C. C.

average increase of from 60 to 70 per cent.—a reduction below the Government proposals of from 15 to 25 per cent.

The bill as adopted is retroactive in this that the new rates apply to all importations of grain made since November 26 last, the date of its submission to the Reichstag, except in so far as it can be satisfactorily proven that importations made since that date, and before the 15th of January next, had been contracted for prior to the earlier date. In other respects the provisions of the bill go into effect on the 1st of January next.

CHAPMAN COLEMAN,
Secretary of Legation.

LEGATION OF THE UNITED STATES,
Berlin, December 22, 1887.

[Translation.]

Bill increasing the duty rates on grain, etc.

We, William, by the grace of God German Emperor, King of Prussia, etc., decree in the name of the Empire, the assent of the Bundesrath and of theReichstag having been first obtained, as follows:

SECTION 1. The duty-tariff, published by proclamation dated May 24, 1885 (Imperial Law Collection, page 111), is amended as follows:

(1) In No. 9, grain and other products of agriculture, will read as follows:

[Per 100 Kilograms.]

	Marks.
Wheat	5.00
Rye	5.00
Oats	4.00
Buckwheat	2.00
Pod fruits	2.00
Barley	2.25
Maize and dari	2.00
Malt (malted barley and malted oats)	4.00

(2) The duty-rate for yeast of all kinds, with exception of wine-yeast, is raised from 42 to 65 marks for 100 kilograms.

(3) The duty-rate is increased from 9 to 12.50 marks for 100 kilograms for the following: Starch-flour, powder-starch, starch-gum, gluten, arrowroot, sago and sago-surrogates, tapioca; and from 10 to 13.50 marks for 100 kilograms for the following: Vermicelli and maccaroni; and from 7.50 to 10.50 marks for 100 kilograms for the following: Mill products from grain and pod fruits, viz, cracked or shelled corn, grits, groats, meal; ordinary baked stuffs, baker's wares.

(4) The appendix to No. 25 S: Rice for the manufacture of starch, under supervision, 3 marks for 100 kilograms is stricken out.

SEC. 2. The new duty-rates established in section 1 for wheat, rye, oats, barley, maize, and dari, malt (No. 9 *a*, *b*, and *B c*, *e*, and *f*), and mill products from grain (from No. 25 q, 2) are in force from November 26, 1887, with the effect stated in section 9, subdivision 2, of the Vereins tariff of July 1, 1869. In so far as the articles named in this law are imported before January 15, 1888, under contracts which can be proven to have been concluded before November 26 last, the rates heretofore existing will be levied. The proof necessary for the purpose can be made by all evidence admissible under the German code of civil procedure. Claims relating thereto must be made good, under penalty of rejection, within four weeks after the publication of this law, before the appropriate authority at the place announced as the one at which the duty is to be levied.

The provisions contained in the above subdivisions 2, 3, and 4 are not applicable when the parties to the contract have come to an agreement in writing respecting the payment of the duty in the event of an increase of the same. In other respects, this law takes effect on January 1, 1888.

IRON INDUSTRY OF GERMANY.

REPORT OF CONSUL WAMER, OF COLOGNE.

In reviewing the condition of trade in general of Germany for the current year there is little that can be reported in a very favorable light. One has become quite accustomed to the complaints, made on all sides, of the depression. Although towards the close of the year 1886, and in the commencement of the present year, there were signs of improvement in some branches of industry—notably the iron—they were of no great or lasting importance, and were due mainly to special causes. The demand in the American market for certain German products has unquestionably been a great relief to this market in a time of actual need.

This depression of trade in Germany may be laid to two principal causes: First, the anxiety created in the public mind by the state of political affairs; and, second, the excess of supply over demand. Although the current year, as already mentioned, opened with somewhat bright prospects, the alarming rumors of war that soon followed and the refusal of the Imperial Reichstag to grant certain governmental demands quickly put a check to this improvement, and business began soon again to resume its former stagnant condition. There were many heavy losses incurred, producing a want of confidence. Latterly there has been a more settled state of affairs, yet there is still much timidity felt as to the political situation. Overproduction in Germany of certain manufactured products has become somewhat alarming, and its evil effects are being seriously felt in some of the most important industrial centers of the country. Prices have been reduced to such a level that many factories are only working at half time with a consequent dismissal of a large number of workmen.

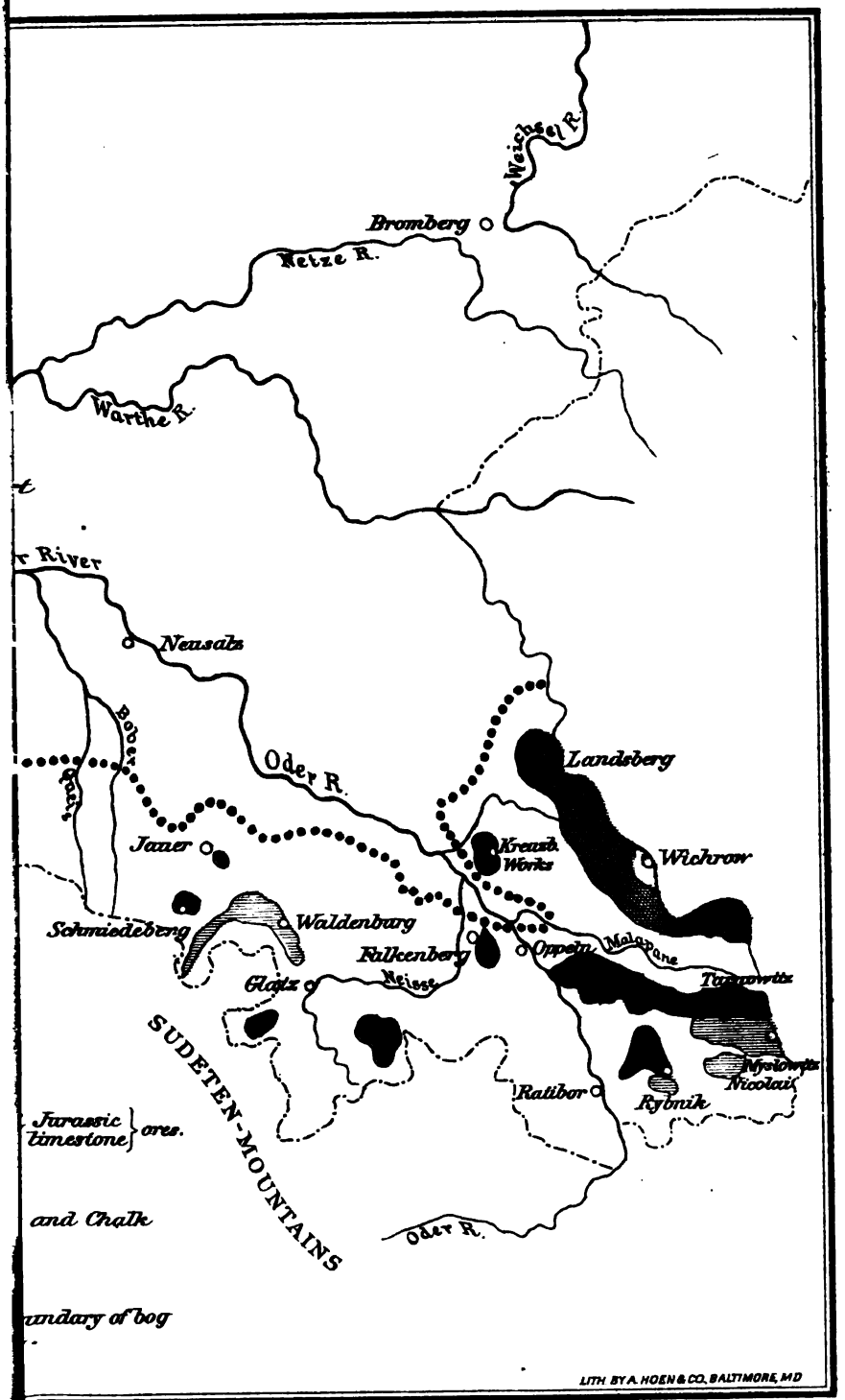
However, every advantage that can possibly be thought of is given by the Government to encourage and increase the export trade of Germany. For instance, the iron and steel industry has already received important concessions in the reduction of freights, etc.

The condition of the iron trade during the current year has somewhat improved over that of the two preceding and bad years for this branch of industry in Germany. This has been greatly brought about by the formation latterly of conventions among the manufacturers for the sale of iron and steel, which has had a tendency to strengthen and keep up prices.

The production of pig-iron in Germany during the last twenty years has made rapid strides, showing a great increase in latter years. The number of blast furnaces has likewise largely increased.

In Germany the blast furnaces are divided into the following groups: Northwestern group, comprising Rhineland and Westphalia; East German group, comprising Silesia; Middle German group, comprising the Kingdom of Saxony and Thuringia; North German group, comprising the Provinces of Saxony, Brandenburg, and Hanover; South German group, comprising Bavaria, Luxembourg, Hessia, and Nassau; Southwestern German group, comprising Saarbrück and Lothringen.

F GERMANY.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Jurassic limestone } ores.
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LITH. BY A. HOEN & CO. BALTIMORE, MD

Number of blast-furnace works and the quantity and description of iron produced by the different groups in 1886.

Iron.	Works.	Tons.
Northwestern group:		
Puddled and spiegel iron	31	757,481
Bessemer iron	11	388,733
Thomas iron	9	377,604
Cast and foundry iron	1.	93,726
Total	62	1,612,544
East German group:		
Puddled and spiegel iron	12	290,727
Bessemer iron	2	19,263
Thomas iron	3	42,611
Cast and foundry iron	8	21,266
Total	25	373,867
Middle German group:		
Puddled and spiegel iron	2	2,396
Bessemer iron	1	3,102
Cast foundry iron	2	4,461
Total	5	9,959
North German group:		
Puddled and spiegel iron	1	9,480
Thomas iron	1	94,652
Cast and foundry iron	1	10,853
Total	3	114,985
South German group:		
Puddled and spiegel iron	9	206,817
Bessemer iron	1	20,330
Thomas iron	2	141,133
Cast and foundry iron	9	152,476
Total	21	520,756
Southwestern German group:		
Puddled and spiegel iron	8	418,538
Thomas iron	3	179,579
Cast and foundry iron	4	81,046
Total	15	679,162

It will thus be seen that the total production of all the groups—that is, of the 131 works—in 1886 was 3,311,273 tons, of which 1,685,439 tons consisted of puddled and spiegel iron, 426,428 tons of Bessemer iron, 835,578 tons of Thomas iron, and 363,828 tons of cast and foundry iron.

The total production of pig-iron in Germany in 1866 was 1,046,900 tons, which rose in 1870 to 1,391,100 tons, in 1875 to 2,029,400 tons, in 1880 to 2,729,000 tons, in 1885 to 3,687,400 tons. In 1886, which was more or less a year of depression, the production declined to 3,311,273 tons, but for the nine months of this year (ending September 30) the production has been 2,849,491 tons against 2,512,112 tons at the same period in 1886. The complete figures from 1866 to 1886 are as follows:

Year.	Tons.	Year.	Tons.	Year.	Tons.
1866	1,046,900	1873	2,240,600	1880	2,729,060
1867	1,113,600	1874	1,906,200	1881	2,914,000
1868	1,264,400	1875	2,029,400	1882	3,380,800
1869	1,413,000	1876	1,846,400	1883	3,469,700
1870	1,391,100	1877	1,932,700	1884	3,600,600
1871	1,563,700	1878	2,147,600	1885	3,687,400
1872	1,988,400	1879	2,226,600	1886	3,311,273

The value of the pig-iron produced during the foregoing period (up to 1885) was as follows:

Year.	Amount.	Year.	Amount.	Year.	Amount.
1866	$20,517,857	1873	$59,193,000	1880	$38,902,381
1867	20,150,952	1874	38,967,190	1881	39,041,666
1868	22,120,500	1875	34,808,000	1882	46,597,143
1869	24,937,857	1876	27,343,095	1883	44,043,809
1870	25,325,000	1877	26,584,047	1884	41,047,762
1871	30,227,857	1878	27,281,428	1885	38,390,714
1872	52,986,200	1879	26,7.0,476		

It will be seen from these figures that while the production in the last twenty years has more than doubled, prices have declined.

The following table will be interesting, as showing the number of works that used wood coal as compared with those that used mineral coal, with the number of men employed, and the time in operation, from the year 1872 to 1885:

Years.	Wood coal—pig-iron.				Coal—pig-iron and mixed iron.			
	Works.	Average number of men employed.	Blast furnaces in operation.	Working period—months.	Works.	Average number of men employed.	Blast furnaces in operation.	Working period—months.
1873	97	6,199	104	940	122	19,912	244	2,479
1873	112	6,689	122	1,159	122	21,440	257	2,660
1874	101	5,742	109	927	118	18,600	230	2,017
1875	89	5,648	96	783	112	17,112	208	1,943
1876	73	3,869	74	629	94	14,667	162	1,661
1877	57	4,659	58	511	77	13,529	154	1,793
1878	42	2,459	46	359	81	13,743	166	1,905
1879	38	2,461	42	357	82	14,925	168	1,881
1880	39	2,613	42	364	94	18,504	204	2,380
1881	39	2,745	39	355	96	18,642	212	2,436
1882	33	2,265	34	335	100	20,750	227	2,696
1883	29	1,939	31	327	103	21,598	227	2,618
1884	31	2,280	33	317	95	20,834	219	2,451
1885	30	2,286	30	320	91	20,532	199	2,369

The consumption of pig-iron in Germany has likewise largely increased during the past twenty years. In 1866 it amounted to 1,116,601 tons; in 1871 it rose to 1,820,274 tons; in 1876 to 2,078,490 tons; in 1881 to 2,800,349 tons, and in 1886 to 3,605,599 tons, or more than treble as much as in 1866. The consumption from 1866 to 1885 was as follows:

Years.	Tons.	Years.	Tons.	Years.	Tons.
1866	1,116,601	1873	2,763,811	1880	2,626,104
1867	1,074,456	1874	2,184,277	1881	2,800,349
1868	1,234,601	1875	2,268,188	1882	3,371,347
1869	1,444,440	1876	2,078,490	1883	3,381,306
1870	1,464,379	1877	2,060,346	1884	3,548,528
1871	1,820,274	1878	2,173,797	1885	3,605,599
1872	2,439,186	1879	2,144,986		

The import of pig-iron into Germany amounted in 1866 to 140,469 tons. It rose in 1871 to 440,634 tons, and in 1873 to 744,000 tons; but since that period the import has fallen off and has declined to 223,148 tons in 1885. The following are the amounts for the twenty years:

Years.	Tons.	Years.	Tons.	Years.	Tons.
1866	140,469	1873	744,121	1880	237,913
1867	116,914	1874	550,467	1881	250,246
1868	182,592	1875	625,645	1882	291,058
1869	189,837	1876	583,858	1883	283,545
1870	229,422	1877	541,864	1884	272,210
1871	440,634	1878	484,679	1885	223,148
1872	662,961	1879	398,657		

With regard to the export of pig-iron from Germany, it was comparatively insignificant twenty years ago. It, however, rose from year to year, when, in 1879, it reached its maximum.

The amounts for the twenty years are as follows:

Years.	Tons.	Years.	Tons.	Years.	Tons.
1866	20,606	1873	154,369	1880	287,529
1867	29,621	1874	222,501	1881	312,570
1868	98,179	1875	339,192	1882	246,487
1869	102,362	1876	306,225	1883	319,448
1870	110,563	1877	365,625	1884	273,716
1871	111,838	1878	418,916	1885	250,238
1872	150,857	1879	433,674		

SPIEGEL IRON.

As spiegel iron is one of the chief exports from this district to the United States, it may not be without some interest to refer particularly to it in this connection.

Spiegel iron is a pig containing manganese, is white and crystalline in structure, and derives its name from the transparent and specular surface of the crystals. Whenever the amount of manganese runs as high as 20 per cent. it loses its specular surface and assumes more of a silver bright, granular appearance. Spiegel iron is made from ores containing from 4 to 30 per cent. of manganese. Iron containing from 30 to 80 per cent. of manganese is called ferro-manganese. Owing to the manganese and high percentage of carbon contained in spiegel iron it is used in the puddling and steel process.

As the spathic iron ore of the Siegerland and its neighborhood is rich in manganese, the manufacture of spiegel iron has become a specialty in Siegen.

The location of the Siegerland will be seen in the subjoined map of the iron-ore deposits of Germany.

The price of spiegel iron varies according to its percentage of manganese and the condition of the world's market. Taking 10 to 12 per cent. as its standard amount of manganese, the highest price paid was $64 per ton at the end of 1872. The present price is about $12 per ton.

It will thus be noticed that there is a large margin between the price of former years and that of the present time. Since, however, the formation of associations among the manufacturers in the Siegen district for the fixing of prices and the sale of spiegel iron, prices have not only been well kept up, but latterly they have advanced somewhat.

The spiegel iron exported to the United States from the Siegen district contains from 16 to 22 per cent. of manganese, and the present price at works is from $17 to $18 per ton of 1,016 kilos.

German spiegel iron is exported principally to America, England, Russia, France, and Italy, and the amount exported now averages about 100,000 tons annually.

WM. D. WAMER,
Consul.

UNITED STATES CONSULATE,
Cologne, December 10, 1887.

THE WOOLEN INDUSTRY OF LIEGE.

REPORT OF CONSUL PRESTON.

There is probably no province of Belgium more favored by natural resources than the province of Liege, and in no other is there greater development of industrial production. Its subterranean riches, its clear rivulets, running down the mountains, furnishing natural motive power, and its rivers providing the means of easy transport, have made it a most important center of industrial production.

The woolen industry was planted here at a most remote period. The city of Liege dates from the year 558, and about the year 700 became the capital of the principality. Verviers seems to be of still greater antiquity, for we find in 648 the Church of St. Remacle replaced a temple in which the goddess Diana was worshiped.

The first mention of the woolen industry is at the beginning of the ninth century. Eginhard, a historian, relates that the Frises furnished the Francs with the blue cloth for their cloaks. The first market was opened by the Count Boudouin III in 958, and by special order it was prohibited to sell by the piece anywhere else than in the market itself while it was open, and also for eight days before and after. This prohibition was the law for the whole country.

A later historian, quoted by F. Henaux, relates that in the year 1130, manufacturers whose business it was to weave woolen and linen cloth lived in higher style and held themselves above other workmen. This shows that at that early time this industry was very prosperous. According to various historians it was about the year 1170 that the inhabitants of the Marquisate abandoned the working of the ore which they had discovered, and turned their attention to the working in wool and manufacturing of cloth. The same writer adds, "it is probable that people from Maestricht inaugurated cloth manufacturing at Verviers, where they had some time before established dyeing factories." Thus it seems that this industry in Verviers is quite as old as in Liege.

The first hall for the sale of woolen stuffs was erected in Liege in 1208. It became very important, and monopolized the trade to the advantage of the manufacturers of Liege, but those from Verviers were admitted on payment of small duties.

In 1302 the turbulence of the guilds at Huy obliged the prince to withdraw their charters, and Detrooz records that at this time the cloth manufactories of Verviers were increased by the settlement there of some manufacturers from Ghent. They asked from Prince Adolph de Waldec the privilege of selling in the hall at Liege the cloths manufactured at Verviers, but before their request was granted the prince died.

Loyens relates in his heraldic collection for the year 1343 a manufacturer who employed from 500 to 600 workmen.

The success of this industry, and the wealth resulting from it, rendered other nations jealous, and in 1331 Edward III, of England, endeavored to seduce Belgian workmen by fine promises. His royal letter runs thus: "They will have good beef and mutton, as much as they can eat. The richest plowmen will not refuse them their daughters in marriage."

The year 1468 was very disastrous to this as well as all industries. Charles the Bold subdued the country, massacred all the inhabitants of Verviers and other places of the Marquisate of Franchimont, destroying all the buildings and particularly the mills and factories. Even the forests were burned, and in the city of Liege there remained not a house inhabitable. But in a few years he permitted the rebuilding of the ruined houses. The horrors of the war were soon forgotten, and Verviers became more flourishing than before. At about this time the iron trade, formerly very important, was quite neglected, and a great number of furnaces were turned into fulling-mills. In the beginning of the next century their number was 15 or 16.

About the year 1617 foreign competition began to produce uneasiness, as neighboring countries tried to imitate the Belgians in manufacturing cloth. Since 1575 England had exported, by way of Antwerp, cloth to the amount in value of 5,000,000 florins, and put enormous duties on all foreign tissues. Holland also tried to appropriate to itself this industry. Leyde and Tilbourg became serious competitors.

About the middle of the seventeenth century the woolen industry declined in Liege, while Verviers, which was more free in her mode of dealing, became more important and received a charter from Maximilian Henry, Prince of Liege, in 1651, granting them the title of a town, with the privilege of fortifying it.

The years 1696 and 1697 were so favorable for the cloth trade, says Detrooz, that the demand could not be supplied for want of workmen.

At this time, says M. S. Bormans, the town of Verviers outstripped the town of Liege in commercial and manufacturing importance.

It was about this time that post-offices were first established at Liege, and in 1698 the Prince of Taxis established one at Verviers.

At the beginning of the eighteenth century Verviers had about 3,000 families with 12,000 to 15,000 population. Writing of this period, Detrooz says, "luxury increased, and the manufacturers, who formerly traveled on foot or horseback, now had their private coaches." The first coach that was made at Verviers in the eighteenth century belonged to a manufacturer of the name of Lonsberg. It was only used to go to the market at Frankfort at Easter and in September, and then hoisted to the granary to remain till the following year.

Notwithstanding this prosperity, there came also times of depression. A crisis came on at the middle of the eighteenth century, which lasted several years and caused the greatest misery, when, in the year 1756, the seven years' war broke out. Hostilities had scarcely commenced when the demand for cloth increased, and the manufacturers of Verviers were unable to fill their orders.

During the twenty-five years preceding the French revolution Verviers became very wealthy and manufacturing flourished up to the year 1793. In the following year the French had overcome the Austrians and advanced into this country. Then the manufacturers emigrated, not only with their gold and goods, but also with the implements of their factories. The misery of the people was then great, and in Verviers 4,000 persons died of hunger during the winter of 1794–'95. During the year 1795 the manufacturers began to come back, the industry and wealth of the country again increased, and the nineteenth century opened under most favorable auspices.

Fostered by free trade, which was law all over the Republic and afterwards in the Empire, the woolen manufacturing interests of Verviers and its environs flourished more than ever. But besides the social revolution that had just taken place, another of not less importance operated. It was the invention, employment, and diffusion of machinery with which England had just endowed the world.

After the return of the emigrants there were at Verviers two manufactories deserving especial notice. Those of Simonis-Franquinet and Biolley-Simonis had reached the highest attainable perfection at that time, and were desirous of employing the newly invented machines which England possessed, and which she jealously guarded by right of invention and by threats of punishment and eternal exile to whoever should take it out of the country.

Notwithstanding all this, a young Irish mechanic named William Cockerill went to Sweden to build machinery for wool spinning; not finding there encouragement or protection, he went to Hamburg in search of employment. There he was encountered by Mr. Mali, the official chief of the firm of Simonis, who went there to purchase wool; this was in 1797. Mr. Mali, appreciating the value of the services of such a man and the progressive character of the house he himself represented, negotiated with him to come to Belgium. A year passed and he came not, when in 1798 Mr. Mali met him again in Hamburg, and on asking why he did not come found that it was for want of money to pay his traveling expenses. This matter was easily arranged, and the young mechanic settled at Verviers with his little family, among whom were his two sons John and William, afterwards so celebrated.

An agreement was immediately entered into between him and the two firms of Simonis and Biolley, to manufacture for them, exclusively, carding and spinning machines. For each machine, with its furnishings and implements, he was to receive 25,000 francs. Cockerill had only the assistance of his two sons, in order to keep his secret, and so it was two years before his success was apparent; then it was so great that all the other manufacturers wanted the same and offered any price, but Cockerill was true to his engagement and worked for no other firms but those above mentioned, and for these only such work as himself and his family could do.

In 1802 a young mechanic, James Hodson, born at Nottingham, England, came from London, where he had settled, to pay a visit to the Cockerills. He fell in love with their daughter Nancy, married her, and settled at Verviers, working for her father and later for the public in general.

This clever mechanic rendered great services to the industry of Verviers by instructing other workmen and opening important workshops for the construction of machines for the spinning of wool. By the year 1807, the houses of Simonis and of Biolley had prospered greatly on account of their use of the new machinery, and William Cockerill, whose term of agreement with them had expired by limitation, settled at Liege with his sons and commenced the manufacture, on a large scale, of divers machinery, supplying France and the most important countries of Europe. John Cockerill was then only fourteen years of age, and managed alone the entire works which have since become so famous.

The first factory for spinning combed wool was established in Verviers, in 1822, and carried on with ever increasing success to this day. It is known under the name of "La Lainiere."

Up to the beginning of the nineteenth century steam-power had not been used to move machinery. In 1805 the first two steam-engines, of four horse-power each, were produced, and very soon England was deprived of the monopoly she had hitherto enjoyed.

William Cockerill (the father) retired in 1813, and his sons vigorously prosecuted the business, and with such marked success that in the following year the Government made them a present of the castle of Seraign, with all its dependencies, in order to enable them more fully to carry out their various enterprises. For besides the mechanical works, they had added others for the spinning of wool and linen.

John Cockerill established the first blast-furnace for coke in this province, and became the most important producer of mechanical power in the world.

To return from this digression to the woolen industry; its success continually increased. In 1865 the production was of the value of 48,600,000 francs, and there were certain firms that gained 1,000,000 to 1,500,000 francs per year. There were times of stagnation, but the difficulties were overcome by extraordinary efforts and enormous sacrifices.

England, the promoter of mechanical spinning, sent over her wool to be spun, or purchased woolen thread at Verviers, and Glasgow became the Verviers entrepot for certain qualities of these products.

It is not less interesting to see Germany come to buy washed wool, or send theirs to be washed here.

Up to the year 1830, Verviers only manufactured fine cloth, which established its fame; but after this time manufacturers began to make mixed goods, called novelties. A report of 1876 says, "the manufacture of fine cloth is more neglected, the novelties being much sought after, and the manufacturers have large orders."

Fine cloth, however, remains a specialty in Verviers. The commission of the Vienna Exposition awarded the distinction for this kind of goods to the house of Ivan Simonis, and they obtained the same at the exhibitions at Philadelphia and at Paris. Comparing the production of different periods, we find that it was for Verviers in 1612, 6,000 pieces of cloth; a century later it was 30,000 pieces; in 1809, 35,000 pieces; in 1852, 64,000 pieces; in 1859, 200,000 pieces; in 1873, 340,000 pieces. Of these products, the United States consume annually to the value of 8,000,000 francs.

In 1880 the production was nearly 400,000 pieces, half of which were consumed in this country. The production remained nearly the same in 1886, but seems to haye increased considerably in this year—1887.

In 1873 the spinning factories of Verviers sold carded wool thread to the value of 49,000,000 francs, this added to the 340,000 pieces of cloth, amounts to above 100,000,000 francs.

The woolen industry consisted first in manufacturing cloth. In 1832, of other woolen goods. Spinning for foreign countries began in 1850; wool-washing in 1860; and the weaving of combed wool in 1870.

The manufacture of carded wool thread became one of the most important branches of this industry, the exports of this were, in—

	Kilograms.
1842	11,310
1849	25,000
1870	5,000,000

In 1873 England purchased here 5,583,000 kilograms of carded thread, and in the following year the exports to Austria were 2,170,000 kilograms.

In 1877 there were exported 7,604,912 kilograms, of a value of 53,234,384 francs.

In 1880 the production of carded wool alone reached 8,000,000 kilograms. Large as the figures appear, it is still increasing, as we find find the exports were, in—

	Kilograms.
1884	8,911,290
1885	9,379,390
1886	11,212,870

Imports and exports of woolen goods with Belgium and other countries for the first nine months, and for the years 1887, 1886, *and* 1885.

	Importation.			Exportation.		
	1887.	1886.	1885.	1887.	1886.	1885.
Woolen thread:	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*
September	70,320	79,890	92,290	761,090	1,346,920	884,750
First nine months	625,900	618,390	735,250	8,478,500	7,757,850	6,498,350
Entire year	.....	852,950	980,680	.....	11,212,870	9,379,390
Tissues of wool cloth, cassimeres, and similares:	*Francs.*	*Francs.*	*Francs.*			
September	285,780	351,720	333,230	138,200	110,110	180,990
First nine months	2,388,240	2,663,900	2,335,300	1,101,400	1,077,860	1,102,530
Entire year	.....	3,365,620	3,002,990	.....	1,370,400	1,433,040
Coatings, Duffels, and other tissues:						
September	218,530	204,060	272,000	30,880	38,490	40,560
First nine months	1,220,880	1,330,110	1,314,120	159,120	167,610	205,270
Entire year	.....	1,748,370	1,901,580	.....	265,420	214,410
Cloths of light tissue:						
September	1,911,280	1,743,800	1,979,250	54,310	34,040	71,260
First nine months	12,316,720	11,727,800	14,059,930	362,970	370,690	679,770
Entire year	.....	15,022,760	17,043,450	.....	464,700	895,900

Importation of wool from La Plata into Europe and the proportion of the same received at Antwerp for twenty years.

Year.	Imports for Europe.	Imports at Antwerp.	Antwerp's proportion to the total.	Year.	Imports for Europe.	Imports at Antwerp.	Antwerp's proportion to the total.
	Bales.	*Bales.*			*Bales.*	*Bales.*	
1867	199,166	100,575	50.28	1877	271,685	166,198	61.54
1868	239,779	144,087	60.07	1878	258,671	138,100	53.29
1869	242,280	123,749	51.08	1879	244,161	122,989	50.35
1870	229,586	135,586	59.05	1880	257,815	136,337	52.11
1871	235,392	162,966	69.23	1881	286,999	126,609	44.11
1872	233,552	138,010	59.09	1882	326,850	150,855	46.16
1873	267,283	163,193	61.06	1883	336,803	131,311	38.98
1874	242,549	156,757	64.64	1884	340,486	122,969	35.18
1875	222,069	158,144	71.21	1885	395,060	127,014	32.15
1876	248,790	157,128	63.11	1886	368,168	125,543	34.15

Importations of wool at Antwerp since 1830.

Year.	Bales.	Year.	Bales.
1830	3,677	1870	135,508
1840	6,300	1880	159,014
1850	21,294	1885	200,618
1860	16,245	1886	214,790

The manufacture of woolen goods is not confined to Verviers alone. There are large establishments in the neighboring towns and villages of Dison, Ensival, Hodimont, Dolhain, Pepinster, Theux, and others.

A slight sketch of some of the leading manufactories may be interesting.

The house of Ivan Simonis dates from 1725. There are about 1,200 workmen employed in its factories at Verviers and Stembert. The fabrication consists of cloths, cassimeres, billiard cloth, manufacturing and razing of combed wool and carded threads, wool and silk stuffs mingled, and other cambrics, ladies' cloth, and divers novelties.

The annual production is from 15,000 to 20,000 pieces, of 28 to 30 meters each. The total motive power used is 700 horse-power, which is furnished by steam engines of 600 horse-power and by two hydraulic wheels and two turbines of 100 horse-power. This industry covers all the operations from the washing of the wool to the finishing of the cloth. The weaving department comprises 450 mechanical looms. The firm is also largely interested in the Society Anonyme Vervietoise for combing and spinning wool. One of its partners, Mr. Jules Poswick, of the administrative council, is a delegated manager of the society. This factory, founded in 1878, is very prosperous. There are about 200 workmen, 22 combing machines, and 10,000 spindles.

The firm of Ivan Simonis contributes the greater part of a pension fund for its workmen. One of the late members founded an orphan asylum, and one of the ladies of the family established a hospital for the female children of workmen who are afflicted with contagious diseases.

The following honorary distinctions have been obtained by this firm, viz: Golden medals at the exhibitions of Harlem, 1825, and Brussels, 1835 and 1841; bronze medal, London, 1851; golden medal, New York, 1853; first-class medal, Paris, 1855; prize medal, London, 1862; silver medal. Paris, 1867; golden medal, Paris, 1878; first diploma of merit, Sidney, 1879; diploma, Brussels, 1880; golden medals at Melbourne, 1880; Amsterdam, 1883; New Orleans, 1884; honorary diploma, Antwerp, 1885.

The house of Peltzer & Sons introduced the first self-acting machines for spinning in 1857, made in Oldham, England, comprising thirty-two assortments of 15,000 spindles for carded wool, and forty assortments with 25,000 spindles for combed wool. Each of these use daily twelve bales of washed wool of 150 kilograms each.

The present firm in 1866 took the establishment of Verviers from the old firm of Lieutenant & Peltzer, founded about 1818, and the manufactory of Pepinster became the property of Mr. H. Lieutenant. In the year 1876 they introduced the industry of the combed wool in the district of Verviers.

The different products of their fabrication are: (*a*) the carded and combed yarns, for their own consumption and for sale, the principal markets for these being Belgium, Scotland, and Germany: (*b*) plain cloths, twilled cloths, doeskins, meltons, kerseys, trouserings, coatings, flannels, billiard cloth, ladies' cloth, woolen and worsted cassimeres.

There are 1,800 workmen employed, including 900 women, and 100 children over fourteen years of age. The machinery is of local manufacture, except the looms, which are from England, and the machines for combed wool constructed in Alsace. They have 25,000

spindles for spinning the carded wool, 17,500 spindles for the combed wool, and 500 mechanical looms; also all machines to wash, to comb, to card, and to dye the wool, and to finish the cloth. They are now working especially wool from Buenos Ayres. The motive power is furnished by fourteen boilers of 1,400 meters of heat-surface (16,000 square feet), and eight steam-engines of 1,200 horse-power. Besides the factory of Verviers they have a branch establishment in Brussels for Belgium, in Amsterdam for the Netherlands, and in Czenstochowa, Russia, a new spinning establishment of 10,000 spindles. Since 1865 they obtained the following distinctions at different exhibitions:

Paris, 1867, a silver medal; Vienna, 1873, award for excellent fabrication; Paris, 1878, a gold medal; Sydney, 1879, first degree of special merit; Melbourne, 1881, golden medal; New Orleans, 1885, medal of first class.

Their annual production is 850,000 kilos of yarns, of which 600,000 are for sale, and 24,000 pieces of cloth. Their exports to the United States are large.

The house of Aubin, Sauvage & Co., of Ensival, near Verviers, was founded in 1884. They manufacture novelty stuffs in combed and carded wool, weaving, spinning, and dyeing. They employ 300 workmen, use 3,000 spindles and 150 mechanical looms. The annual production is about 6,000 pieces, or 210,000 meters. They received a gold medal at the exhibition at New Orleans in 1884–'85, and the highest distinction at the universal exhibition at Adelaide in 1887.

In connection with the woolen industry, that of artificial wool, also called regenerated wool, is worth mentioning. This consists of making wool out of pieces of old stuffs. Fifty years ago these rags were passed through a brake, and the wool resulting from the process was sold under conditions to admit 25 per cent. of torn rags. The manufacturer was obliged to remove these rags, and consequently only 70 to 75 per cent. could be used to mix with his wool. In the past twenty-five years great improvements were made in this industry. The machines were perfected to such a degree that not a single piece of rag is mixed with the wool. The carbonization replaced the very expensive working, which consisted in taking out by hand all the cotton that was in the wool. Dyeing has also contributed to the development of this industry. The rags are now colored in all shades, from the darkest to the clearest, and the manufacturer is now able to use regenerated wool at all times and reduce the cost of his goods.

The latest progress is a machine which has for its essential quality a chamber keeping the rags until a tambour provided with steel combs revolves and tears them away. A five horse-power machine can produce 150 to 200 kilograms of wool a day.

The trade in this article is very important in all countries, but I have not found any of it being shipped to the United States. They say: "Some time ago we tried to export to the United States, but we did not succeed."

Another kind of artificial wool is produced from wood, or rather from the ramie plant, a kind of nettle, which grows very large, and is cultivated in France especially, and in Algiers. The operation to produce the wool from it consists in removing of the membrane covering the stalk by a certain process, after which the stems pass through a cylinder, which crushes the heart of the wood, and when it is quite dry only wool comes out, and in the case that some par-

ticle of the wood remains, the perfected carding-machine removes it. This kind of wool is known to the trade under the name of cosmos fiber.

I do not know of any of it ever being shipped to the United States from here. A company called the Cosmos Fibre Company was started some time ago in New York, but did not succeed, as I am informed.

It may not be out of place to observe here that the laws of Belgium admit wool (like all other raw material) free of duty, and that the manufacturers are thus enabled to procure their supplies in the cheapest markets of the world, and to obtain the finest wool from South America, such as can not be raised in the United States, while our manufacturers at home have to pay a duty on the raw material equal to what their competitors here pay on the manufactured article.

There is surely enough enterprise among American manufacturers to compete successfully with any foreigners for the home market at least, if not for export, if they are placed on an equal footing in regard to duties on the raw material.

WM. S. PRESTON,
Consul.

UNITED STATES CONSULATE,
Verviers and Liége, December 15, 1887.

TWENTY-THREE YEARS OF AN ENGLISH TRADES-UNION.

REPORT OF CONSUL WIGFALL.

The membership of the Glass Bottle Makers of Yorkshire United Trade Protection Society covers points as far remote from one another as Blaydon-on-Tyne, in the county of Durham, in the north of England, on the one hand, and Newport, in the county of Monmouth, in the south of Wales, on the other; but the bulk of the branches are situated in the district extending from Leeds to the vicinity of Sheffield, in the West Riding of Yorkshire, including an irregular pentagon, the angles of which are indicated by the towns of Leeds, Dewsbury, Rotherham, Conisboro, and Pontefract.

This district is partly coincident with the great West Riding of Yorkshire coal-field, which, though it has not yet been fully developed, is considered, I believe, by competent authority to contain the largest coal deposits in the British Islands. The industries of the district are a conglomerate of all, or nearly all, which are known in Great Britain. Textile manufactures, wholly or in part of wool, flax, silk, and cotton, coal and iron mining, clay and metal working, the production of leather, chemicals, and glass, and the more diversified minor manufactures are largely carried on.

The Glass Bottle Makers Society, therefore, will be seen to occupy a district representative of very varied interests; and it has occurred to me that some detailed statistics of the society's operations, extending over a period of more than twenty years, might be worth submitting to the Department.

I make the subjoined extracts and memoranda from a report of the central secretary of the Glass Bottle Makers Society. The dates range from 1864 to 1887.

The following table shows that the members of the society had increased in number from 692 in 1867 to 1,554 in 1886. This member-

ship is divided among thirteen branches, being an average of 119 to each branch. This is the table at page 665, referred to farther on.

Summary of income and expenditures for twenty years, number of members, amount of funds, and average per member.

Years.	Members at the end of year.	Balances at beginning of year.	Income.	Expenditures.
		£ s. d.	£ s. d.	£ s. d
1867	692	4,733 8 6	2,212 14 0	1,756 6 7
1868	720	5,189 15 11	2,943 15 11	2,298 12 7
1869	759	5,839 19 3	2,306 17 9	936 16 11¼
1870	792	7,210 0 0¼	1,949 1 0	1,070 16 5¼
1871	878	8,088 4 7	2,073 10 7	952 8 3
1872	954	9,209 6 11	3,308 11 4	2,373 7 11¼
1873	1,018	10,144 10 3¼	2,380 5 9	713 0 7¼
1874	1,058	11,811 15 5	2,481 8 2¼	821 5 0¼
1875	1,120	13,471 18 7	4,061 11 1¼	2,059 1 11¼
1876	1,137	15,474 7 9	4,088 11 6	2,896 3 0
1877	1,150	16,616 16 3	6,886 9 5	5,041 15 9
1878	1,149	18,461 9 11	6,357 18 10	8,419 15 2¼
1879	1,149	16,399 13 6¼	3,599 16 8¼	9,457 1 1
1880	1,061	10,542 9 2	3,149 17 3	6,036 6 10¼
1881	1,045	7,655 19 6¼	2,690 3 2	2,589 1 8
1882	1,095	7,757 1 0¼	2,015 18 0	1,674 19 7
1883	1,227	8,097 19 5¼	2,453 11 4¼	2,409 1 0¼
1884	1,421	8,079 0 8¼	4,131 9 10	3,991 5 6
1885	1,522	8,282 14 1¼	4,056 5 11	3,743 13 4¼
1886	1,554	8,595 6 8	5,586 10 8¼	9,576 9 6¼
Total			68,684 8 4¼	68,812 9 0¼

Years.	Balances at end of year.	Average per member.	Increase.		Decrease.	
			Members.	Funds.	Members.	Funds.
	£ s. d.	£ s. d.		£ s. d.		£ s. d.
1867	5,189 15 11	8 9 1	4	456 7 5	.....	.....
1868	5,839 19 3	8 2 2	28	650 3 4	.....	.....
1869	7,210 0 0¼	9 9 11	39	1,370 0 9¼	.....	.....
1870	8,088 4 7	10 4 3	33	878 4 6¼	.....	.....
1871	9,209 6 11	11 7 3¼	.....	1,121 2 4	.....	.....
1872	10,144 10 3¼	12 11 1	86	935 3 4¼	.....	.....
1873	11,811 15 5	12 7 7¼	76	1,667 5 1	.....	.....
1874	13,471 18 7	13 4 8	64	1,660 3 2	.....	.....
1875	15,474 7 9	14 12 6¼	40	2,002 9 2	.....	.....
1876	16,616 16 3	16 16 8¼	62	1,142 8 6	.....	.....
1877	18,461 9 11	16 4 8	17	1,844 13 8	.....	.....
1878	16,399 13 6¼	14 4 2¼	13	.....	.....	2,061 16 4¼
1879	10,542 9 2	9 3 6	.....	.....	1	5,857 4 4¼
1880	7,655 19 6¼	7 4 6	.....	.....	88	2,886 9 7¼
1881	7,757 1 0¼	7 8 5¼	.....	101 1 6	16	.....
1882	8,097 19 5¼	7 19 2¼	.....	340 18 5	20	.....
1883	8,079 0 8¼	6 11 8¼	202	44 10 4	.....	.....
1884	8,282 14 1¼	5 16 6¼	194	140 4 4	.....	.....
1885	8,595 6 8	5 12 11¼	101	312 12 6¼	.....	.....
1886	4,605 7 10	2 19 3¼	32	.....	.....	3,989 18 10
Total			971	14,607 8 6¼	125	14,795 9 2¼
Deduct			125	.....	.....	14,667 8 6¼
Net			846	.....	.....	128 0 8

From these figures it would seem that while the membership of the society has continued increasing year by year, with slight interruption, the balances of funds in hand and the consequent averages per member attained their height in 1877, when a total balance of £18,461 9*s.* 11*d.* appeared ($89,842.87), giving an average per member of £16 4*s.* 8*d.* ($78.99). At the end of 1886 these items had been diminished to £4,605 7*s.* 10*d.* and £2 19*d.* 3¼*d.* ($22,385.90 and $14.42).

The report continues.

From 1866 to 1877 the funds increased to the amount of £13,728 1*s.* 5*d.*, but from 1877 to 1880 they decreased by £10,805 10*s.* 4½*d.* From 1880 to 1885 they increased by £949 7*s.* 1½*d.*; and from 1885 to 1886 they decreased by £3,989 18*s.* 10*d.* The total amount of increase in the society's funds during the twenty years is £14,667 8*s.* 6½*d.*, and the total amount of decrease is £14,795 9*s.* 2½*d.* The total amount of income from 1866 to 1886 is £68,684 8*s.* 4½*d.*, and the expenditure £68,812 9*s.* 0½*d.*, which gives a decrease of balance of £128 8*d.*

From 1866 to 1878 the number of members increased by 462, but from 1878 to 1882 they decreased by 125, and from 1882 to 1886 they increased by 529, which gives a total increase of 971, less 125, which is a net increase of 856 for the twenty years. These returns include 53 members of the Blaydon-on-Tyne branch, which were introduced in October 6, 1884, quarter for the first time.

The following table will show the principal heads under which the expenditure has taken place during the last twenty years, which is culled from the summary table at page 664:

Total of income and summary of expenditure from 1866 *to January* 24, 1887.

INCOME.	£	*s.*	*d.*	EXPENDITURE.	£	*s.*	*d.*
Contributions, Levies, Fines and entrances, Bank interest, Sundries	67,616	11	1	Donation and traveling benefit	26,414	5	9½
				Emigration and benevolent grants	420	0	0
				Superannuation benefit	2,670	16	0
				Funeral benefit, including benefit to widows, per 24th rule	6,588	15	0
Grants, etc. (about)	1,067	17	3½	Quarterly and special delegations	2,008	8	1½
				Lock-out allowance	20,141	1	11
				Salaries of branch officers, council meetings, and rent of rooms	3,758	0	5
				Printing, stationery, account books, postage, law expenses, and sundries	2,168	6	1½
				Grants to other trades, associations, and institutions	4,082	17	8
				Deficiencies	614	18	0
	68,684	8	4½		68,812	9	0½
Balance, October 29, 1886	4,733	8	6	Balance, January 24, 1887	4,605	7	10
	73,417	16	10½		73,417	16	10½

	£	*s.*	*d.*
Net income	68,684	8	4½
Net expenditure	68,812	9	0½
Increase of expenditure over income	128	0	8
Balance, October 29, 1866	4,733	8	6
Decrease of balance during the twenty years	128	0	8
Balance, January 24, 1887	4,605	7	10

A reference to the first table will show that the average worth of the society is £2 19*s.* 3½*d.* per member. This is one of the most striking features in this table. It is the lowest average there has been since 1866. The average in 1866 was £7 9*s.* 1*d.*, or £4 9*s.* 9½*d.* per member more than on January 24, 1887.

The amount of grants received from other districts is about £1,067 17*s.* 3½*d.* Of this sum £15 was received from the Alliance of Organized Trades in 1868, during a dispute which then took place at Thornhill Lees; £738 14*s.* was received from the Glass Bottle districts in 1878, during the lock-out at Thornhill Lees and Conisbro'; and £272 from the Glass Bottle districts during last year, in connection with the Stairfoot dispute; and £57 3*s.* 3½*d.* received by Stairfoot branch from the miners and others in response to a local appeal. Taking this as an approximation of the total amount of assistance received by our society from all sources since the end of the year 1865, it has paid to other societies and various institutions £2,985 4½*d.* more than it has received.

The assistance rendered to other trades and organizations by the Amalgamated Engineers' Society, during a period of thirty-three years, is £84,062, and averages £2 12*s.* per member; whereas £4,032 17*s.* 8*d.*, paid by our society during a period of twenty years averages £3 15*s.* 3½*d.* per member. Hence, a charge of parsimony cannot justly be made against our society.

The yearly details comprised in "the summary table" are here appended.

Summary of expenditure for twenty consecutive years, and average amounts per member.

	Year ending Dec. 23, 1867.		Year ending Nov. 23, 1868.		Year ending Jan. 17, 1870.		Year ending Dec. 19, 1870.	
	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Donation and traveling benefit	953 14 0½	1 7 7	1,181 7 7	1 12 9½	207 19 6	0 5 5½	202 18 7	0 5 1½
Superannuation benefit	17 8 0	0 0 6	19 4 0	0 0 6½	46 15 0	0 1 2½	44 14 0	0 1 1½
Funeral benefit, including benefit to widows, per twenty-fourth rule	208 0 0	0 6 0	211 0 0	0 5 10½	149 0 0	0 3 11	270 0 0	0 6 9½
Quarterly and special delegations	128 19 1	0 3 8½	98 2 3½	0 2 8½	68 7 4	0 1 9½	74 9 6½	0 1 10½
Trade privileges or protection	79 6 5½	0 2 3	477 18 7	0 13 3½	23 4 7	0 0 7½	221 12 3½	0 5 7
Salaries of branch officers, council meetings, and rent of rooms	126 16 3½	0 3 7½	134 5 10½	0 3 8½	151 19 2	0 4 0	133 19 3	0 3 4½
Printing, stationery, account books, postage, law expenses, and sundries	64 11 6	0 1 10½	62 7 9	0 1 8½	69 3 2½	0 1 9½	81 14 3½	0 2 0½
Grants to other trades, associations, and institutions	175 18 2	0 5 1½	69 8 1	0 1 11	190 12 6	0 5 0½	40 2 6	0 1 0
Deficiencies	1 13 0½	0 0 0½	39 8 5	0 1 1	29 15 8	0 0 9½	1 6 0	0 0 0½
Total	1,756 6 7	2 10 9	2,293 12 7	3 3 8½	936 16 11½	1 4 8	1,070 16 5	1 5 9½

	Year ending Nov. 20, 1871.		Year ending Jan. 13, 1873.		Year ending Dec. 15, 1873.		Year ending Nov. 16, 1874.	
	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Donation and traveling benefit	281 17 10	0 7 1½	17 10 8	0 0 4½	7 7 9	0 0 1½	30 2 6	0 0 7
Superannuation benefit	43 4 0	0 1 1	111 13 0	0 2 6½	101 9 0	0 2 1½	94 8 0	0 1 10½
Funeral benefit, including benefit to widows, per twenty-fourth rule	294 0 0	0 7 5	397 0 0	0 9 0½	343 0 0	0 7 2½	369 0 0	0 7 2½
Quarterly and special delegations	70 15 10	0 1 9½	84 10 11	0 1 9½	48 18 2	0 1 0½	58 3 1½	0 1 1½
Trade privileges or protection	79 18 0	0 2 0						
Salaries of branch officers, council meetings, and rent of rooms	123 7 6	0 3 1½	173 9 2	0 3 11½	139 1 11	0 2 10½	170 0 5½	0 3 4
Printing, stationery, account books, postage, law expenses, and sundries	50 7 2	0 1 3½	59 9 7½	0 1 4½	55 10 11	0 1 1½	52 5 11½	0 1 0½
Grants to other trades, associations, and institutions	8 17 11	0 0 2½	1,529 15 0	1 14 10	17 10 0	0 0 4½	47 5 0	0 0 11
Deficiencies					0 2 10½			
Total	952 8 3	1 4 0½	2,373 7 11½	2 14 0½	713 0 7½	0 14 11½	821 5 0½	0 16 1½

Summary of expenditure for twenty years.—Continued.

	Year ending Jan. 10, 1876.		Year ending Dec. 11, 1876.		Year ending Nov. 12, 1887.		Year ending Jan. 6, 1879.	
	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Donation and traveling benefit	30 8 6	0 0 6½	76 18 6	0 1 4½	439 16 6	0 7 8½	3,082 3 0	2 13 7
Superannuation benefit	111 0 0	0 2 1	99 7 0	0 1 9½	120 18 0	0 2 1½	214 10 0	0 3 8½
Funeral benefit, including benefit to widows, per twenty-fourth rule	430 0 0	0 8 1½	333 0 0	0 5 11½	381 0 0	0 6 8½	469 0 0	0 8 10
Quarterly and special delegations	256 18 2½	0 4 10½	186 12 11	0 2 5½	118 13 8	0 2 0	233 5 8	0 4 0½
Trade privileges or protection	184 7 7	0 3 5½	1,775 15 0	1 11 8½	3,629 18 5	3 3 9½	3,881 0 0	3 7 5½
Salaries of branch officers, council meetings, and rent of rooms	215 0 0	0 4 0½	181 0 8	0 3 2½	195 7 2½	0 3 5	276 3 4½	0 4 9½
Printing, stationery, account books, postage, law expenses, and sundries	375 9 9	9 7 1	190 14 2½	0 3 4½	128 13 0½	0 2 3	170 6 1	0 2 1
Grants to other trades, associations, and institutions	43 0 0	0 0 1½	28 10 0	0 0 6	9 7 0	0 0 1½	63 0 0	0 1 1
Deficiencies	412 17 11	0 7 10½	24 4 8½	0 0 5	18 1 11	0 0 3½	30 7 1	0 0 6½
Total	2,059 1 11½	2 17 9½	2,896 3 0	2 11 6½	5,041 15 9	4 8 0½	8,419 15 2½	7 6 5

	Year ending Dec. 8, 1879.		Year ending Nov. 8, 1880.		Year ending Jan. 2, 1882.		Year ending Dec. 4, 1882.	
	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Donation and traveling benefit	3,550 19 0	3 1 10½	2,200 0 0	2 1 5½	1,456 18 5	1 7 10½	617 18 7	0 12 1½
Emigration and benevolent grants					72 0 0	0 1 4½	43 0 0	0 0 10
Superannuation benefit	215 15 0	0 3 8½	121 19 0	0 2 3½	139 1 0	0 2 8	165 10 0	0 3 2½
Funeral benefit, including benefit to widows, per twenty-fourth rule	352 0 0	0 6 1½	257 0 0	0 4 10	279 0 0	0 5 4	283 0 0	0 5 2
Quarterly and special delegations	181 10 8½	0 3 1½	55 9 7½	0 1 0½	45 15 11½	0 0 10½	41 15 0½	0 0 9½
Trade privileges or protection	4,314 18 0	3 15 1½	3,053 3 6	2 17 6½	251 6 6	0 4 9½	96 0 0	0 1 10½
Salaries of branch officers, council meetings, and rent of rooms	197 17 11½	0 3 5½	189 14 9	0 3 6½	208 18 10	0 4 1½	151 12 0	0 2 11½
Printing, stationery, account books, postage, law expenses, and sundries	92 0 10	0 1 7	89 18 9	0 1 8½	106 10 11½	0 2 0½	75 14 10	0 1 5½
Grants to other trades, associations, and institutions	552 10 0	0 9 7½	12 5 0	0 0 2½	29 15 0	0 0 6½	220 5 0	0 4 3½
Deficiencies			56 16 3	0 1 0½			0 4 1½	0 0 0½
Total	9,457 1 1	8 4 5½	6,036 6 10½	5 13 9½	2,589 1 8	2 9 7	1,674 19 7	1 12 10

Summary of expenditure for twenty years.—Continued.

	Year ending Nov. 5, 1883.		Year ending Dec. 29, 1884.		Year ending Nov. 30, 1885.		Year ending Jan. 24, 1887.		Total expenditure for twenty years, and average per member.	
	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	Average per member.	Expenditure.	*Average per member.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Donation and traveling benefit	970 0 0	0 17 2	2,629 14 3	1 18 7	2,462 13 0	1 12 4½	6,013 18 0	3 17 4½	26,414 5 9½	24 13 3
Emigration and benevolent grants	68 0 0	0 1 2½	100 0 0	0 1 5½	50 0 0	0 0 7¾	87 0 0	0 1 1½	420 0 0	0 7 10
Superannuation benefit	172 12 0	0 3 0½	249 17 0	0 3 7¾	251 10 0	0 3 8½	330 12 0	0 4 2½	2,670 16 0	2 9 10½
Funeral benefit, including benefit to widows, per twenty-fourth rule	290 0 0	0 5 1½	450 0 0	0 6 7	393 0 0	0 5 1¾	450 15 0	0 5 9½	6,588 15 0	6 3 0½
Quarterly and special delegations	87 7 11	0 1 6½	37 12 1	0 0 6½	33 11 10	0 0 5½	96 8 7½	0 1 2½	2,008 8 1½	1 17 6
Trade privileges or protection	31 2 6	0 0 6½	32 16 0	0 0 5½	.....	0 0 0	2,008 14 6	1 5 10	20,141 1 11	18 16 1½
Salaries of branch officers, council meetings, and rent of rooms	172 7 9	0 3 0½	241 6 8½	0 3 6½	205 4 3	0 2 8½	365 12 3½	0 4 8½	3,753 0 5	3 10 1
Printing, stationery, account books, postage, law expenses, and sundries	56 14 10½	0 1 0	160 12 5½	0 2 4½	126 12 3½	0 1 7½	99 7 7½	0 1 3½	2,168 6 1½	2 0 5½
Grants to other trades, associations, and institutions	560 6 0	0 9 11	89 7 0	0 1 3½	221 2 0	0 2 10½	124 1 6	0 1 7	4,082 17 8	3 15 3½
Deficiencies	.....	.....	.....	.....	.....	.....	.....	.....	614 18 0	0 11 5½
Total	2,409 1 0½	2 2 7½	3,991 5 6	2 18 6½	3,743 13 4½	2 9 2½	9,576 9 6½	6 3 2¾	68,812 9 0½	64 5 0

* This average is obtained by the mean number of members for the twenty years, and not by the number of members for the year 1886.

In the opening paragraph of his report the secretary calls attention to marked diminution in the society's reserve fund, and warns the members that expenditure must be regulated by income, if entire exhaustion of the fund is not contemplated. The custom of the society in this regard appears to have greatly changed in recent years and the result has not been satisfactory. The secretary continues:

It is not to be expected that such an expenditure can be continued from season to season and year to year, which has taken place for several years past. The changes which have taken place in the customs and usages of the trade require to be met, and the financial transactions require to be governed by them in order to stop the perpetual decrease of the society's funds. The continual increase of the obligations contracted by the society will, of themselves, without any extraordinary expenditure taking place through disputes with the masters, such as the recent lock-out on the wages question, be sufficient to drain the society of its funds. The payments out must be governed by the payments into the society, or the inevitable result will be that the funds will become entirely exhausted. There seems to be a uniform expectation that benefits must be paid in the future as they have been in the past, and the fact seems to be lost sight of altogether that there was a time in the history of the society, and that within the recollection of many still "in the land of the living," when the society did not hold itself liable to pay the benefits which have for some years been paid. Donations to members out of work were not paid; emigration grants, widows' grants, and benevolent grants were not paid from the society's funds, which alone have absorbed, during the past ten and a half years, £25,305 17*s.* 9*d.*

The following are the respective amounts paid, as shown in the table at page 587, except the item paid to widows, which is deducted from the amount paid for funerals:

	£	*s.*	*d.*
Donations	23,475	17	9
Emigration grants	121	0	0
Widows' grants	1,410	0	0
Benevolent grants	299	0	0
Total	£25,305	17	9

When the society adopted these benefits it was supposed that they could be maintained, and, as stated already, the expectancy is that they can or must still be paid. If so, all the better. Those who study the finances should be able to form the best opinion, and therefore this business must be left in their hands.

The table referred to as "at page 587" is here appended, being—

**Summary of net income and expenditure of the society since the lock-out,* 1876.

The following are the principal heads under which the income and expenditure have taken place during the past ten and a half years:

INCOME.	£	*s.*	*d.*
Contributions	22,478	17	0
Levies	14,694	15	2½
Fines and entrances	1,182	15	8
Bank interest	3,827	11	4
Sundries	70	0	5½
Deficits refunded	7	18	1
Emigration grants refunded	16	0	0
Received from—			
The amalgamated districts on account of lock-out.	758	14	0
	272	0	0
The Leeds Chamber of Commerce and amalgamated districts toward expenses of visit to France and reports	20	13	0
Subscriptions to testimonials, etc.	13	6	3
Stairfoot appeal	57	8	3½
To balance per Blaydon-on-Tyne branch, from July 14, 1884	383	13	10
	43,727	13	1½
Balance, June 26, 1876	16,202	6	1½
	59,929	19	3

EXPENDITURE.	£	*s.*	*d.*
Lock-out and strike allowance	19,074	14	5
Donations and traveling benefit	23,475	17	9
Law damages	80	4	5
Quarterly and special delegations, etc	1,181	9	10
Council meetings, officers' salaries, and miscellaneous items	2,219	0	8
Emigration grants	121	0	0
Funerals and widows	3,752	15	0
Superannuation benefit	2,037	12	0
Benevolent grants	299	0	0
Printing, stationery, and miscellaneous items	1,104	16	5½
Grants to trades and institutions, etc	1,872	11	6
Deficits	105	9	4½
	55,324	11	5
Balance, January 24, 1887	4,605	7	10
	59,929	19	3

*There is a difference of £9 14*s.* 3½*d.* in the totals of income and expenditure in this table and the table on page 586, which arises through reducing the income and expenditure to net, when compiling the yearly tables from the quarterly tables.

With the explanation afforded in the note above, the following table appears, showing by quarters—

The financial transactions since the lock-out at Thornhill Lees and Conisbro' commenced.

Quarters.	Income.			Expenditure.			Increase of balance.			Decrease of balance.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Sept. 18, 1876	1,390	18	0	827	1	8½	563	16	3½			
Dec. 11, 1876	1,407	13	11	1,557	0	1				149	6	2
Mar. 5, 1877	1,796	19	5	1,647	4	11½	151	14	5½			
May 28, 1877	1,580	5	8	1,280	4	8	300	1	0			
Aug. 20, 1877	1,890	14	6	1,079	3	0	811	11	6			
Nov. 12, 1877	1,616	9	10	1,035	3	1½	581	6	8½			
Feb. 4, 1878	1,553	9	8	1,736	8	6				182	18	10
Apr. 29, 1878	1,082	10	10	2,489	5	11½				1,406	15	1½
July 22, 1878	1,566	7	4	1,241	12	10	324	14	6			
Oct. 14, 1878	1,124	8	3	1,115	6	10	9	1	5			
Jan. 6, 1879	1,082	2	9	1,888	1	1				805	18	4
Mar. 31, 1879	711	14	8	2,353	12	0				1,638	18	1½
June 28, 1879	923	14	8	1,711	1	5½				787	6	9½
Sept. 15, 1879	1,356	10	7½	1,229	18	7½	126	12	0			
Dec. 8, 1879	607	16	9	4,162	9	0				3,554	12	3
Mar. 1, 1880	813	4	6	3,329	10	1				2,516	5	7
May 24, 1880	821	12	8	1,571	2	4				749	9	8
Aug. 16, 1880	901	6	11	601	7	7½	299	19	3½			
Nov. 8, 1880	613	13	2	534	6	10	79	6	4			
Jan. 31, 1881	674	12	9	839	14	7				165	1	10
Apr. 25, 1881	527	10	9	713	0	10½				185	10	1½
July 18, 1881	609	4	1	364	5	1½	244	18	11½			
Oct. 10, 1881	456	19	11	247	14	6	209	5	5			
Jan. 2, 1882	421	15	8	424	6	7				2	10	11
Mar. 27, 1882	498	8	2½	470	10	0½	27	18	2			
June 19, 1882	460	1	3½	337	7	9	122	13	6½			
Sept. 11, 1882	590	12	0	226	11	7	364	0	10			
Dec. 4, 1882	466	16	6	640	10	2½				173	13	8½
Feb. 26, 1883	605	16	2	704	13	10½	98	17	8½			
May 21, 1883	536	10	11½	570	6	4				33	15	4½
Aug. 13, 1883	715	2	3	349	4	1	365	18	2			
Nov. 5, 1883	596	4	9	784	19	6				188	14	9
Jan. 28, 1884	728	3	4	1,003	12	7				275	9	3
Apr. 21, 1884	653	15	2	562	16	9	90	18	5			
July 14, 1884	882	13	4	513	15	8	368	17	8			
Oct. 6, 1884	1,128	6	5	676	1	9	452	4	8			
Dec. 29, 1884	741	11	9	1,237	18	11				496	7	2
Mar. 23, 1885	921	10	2	1,219	10	8				298	0	6
June 15, 1885	1,119	13	4	728	8	5½	391	4	10½			
Sept. 7, 1885	1,116	8	5	502	11	9½	613	16	7½			
Nov. 30, 1885	900	3	4½	1,294	11	10				394	8	5½
Feb. 22, 1886	993	7	4	1,763	9	8				770	2	4
May 17, 1886	977	5	7	1,173	9	3				196	3	8
Aug. 9, 1886	1,229	5	1	808	17	0	420	8	1			
Nov. 1, 1886	1,060	2	5	2,283	6	9				1,223	4	4
Jan. 24, 1887	1,331	12	3½	3,562	8	10½				2,230	16	7
Total	43,737	7	5	55,334	5	8½	7,029	6	7½	18,405	9	10½
Balance	*16,202	6	1½	†4,605	7	10						
Deduct										7,029	6	7½
Total	59,939	13	6½	59,939	13	6½				11,376	3	3

*June 26, 1876. †January 24, 1887.

The secretary says:

The foregoing table has been prepared from the quarterly tables of net income and expenditure, and represents the amounts of income and expenditure, and the increase and decrease of balance for every quarter, respectively, since the lock-out took place at Thornhill Lees and Conisbro' in July, 1876. The totals are—

	£	s.	d.		£	s.	d.
Income	43,737	7	5	Expenditure	55,334	5	8½
Balance, June 26, 1876	16,202	6	1½	Balance, January 24, 1887	4,605	7	10
	59,939	13	6½		59,939	13	6½

	£	s.	d.
Expenditure	55,334	5	8½
Income	43,737	7	5
Increase of expenditure over income	11,596	18	3½
Balance, January 24, 1887	4,605	7	10
Decrease of balance during ten and a half years	11,596	18	3½
Balance, June 26, 1876	16,202	6	1½

The period which it covers is ten and a half years—from June 26, 1876, to January 24, 1887. The income for this period is £43,737 7*s.* 5*d.*, and the expenditure £55,334 5*s.* 8½*d.*, which is an increase of expenditure over the income by £11,596 18*s.* 3½*d.* The fluctuation of the society's balance is shown for the same period, amounting to £7,029 6*s.* 7½*d.* increase, and £18,405 9*s.* 10½*d.* decrease, which leaves the net decrease of balance £11,596 18*s.* 3½*d.*

Nuuber of members in the society and number out of employment at the end of every quarter from September 30, 1867, to January 24, 1887; also the average state of trade, etc.

Quarters.	Account, written off.		Number of members.			Average state of trade.	Number of glass-bottle houses.			Number of members out of employment.					Number of members left the trade or in other districts, and paying per thirty-second rule.	Number of members receiving trade benefits.			Number of members receiving superannuation benefit.			
	Exclusions.	Deceased.	Apprentices and youths.	Journeymen.	Total.		Working.	Standing.	Total.	Bottle-makers.	Blowers.	Gatherers and blowers.	Gatherers.	Total.		Out of work.	Strike and lock-out.	Total.	5s. per week.	4s. per week.	3s. per week.	Total.
Sept. 30, 1867			166	502	68	Bad				29	35	4	23	91	4	70		70	1		1	2
Dec. 23, 1867			149	543	692	do				46	66	12	39	163	7	131		131	1		1	2
Mar. 16, 1868			164	540	704	do				44	62	10	33	152	9	112		112	1		1	2
June 8, 1868			167	565	732	Improving				14	24	3	19	60	8	37		37	1		1	2
Aug. 31, 1868			154	581	735	do				15	23	3	12	53	11	21		21	1		1	2
Nov. 23, 1868			159	561	720	Moderate				15	25	2	11	53	11	17		17	1		1	2
Feb. 15, 1869			156	570	726	do				12	19	4	8	43	14	15		15	2		1	3
May 10, 1869			145	592	737	Good	55	10	65	7	12	4	4	27	16	5		5	3		1	4
Aug. 2, 1869			161	592	753	do	58	3	61	11	11	5	4	31	14				3		1	4
Oct. 29, 1869			154	607	761	Dull	56	6	62	16	18	3	11	48	15	5		5	3		1	4
Jan. 17, 1870			150	609	759	do	55	7	62	17	23	7	14	61	16	23		23	3		1	4
Apr. 11, 1870			149	623	772	Improving	56	7	63	12	30	4	11	57	17	13		13	3		1	4
July 4, 1870			141	643	784	Moderate	58	7	65	18	17	4	3	42	15				3		1	4
Sept. 26, 1870			133	664	797	do	58	6	64	19	20	5	4	48	20	1		1	3		1	4
Dec. 19, 1870			136	656	792	Bad	54	10	64	26	39	12	17	94	20	45		45	3		1	4
Mar. 13, 1871			123	674	797	Improving	55	10	65	20	26	13	16	75	22	28		28	3		1	4
June 5, 1871			115	680	795	Moderate	57	8	65	14	16	9	7	40	22	7		7	3		1	4
Aug. 28, 1871			122	676	798	do	57	8	65	21	18	3	6	48	21	2		2	3		1	4
Nov. 20, 1871			121	671	792	do	57	7	64	14	15	2	8	39	25	7		7	3		1	4
Feb. 12, 1872			123	699	812	Good	58	8	66	12	14		8	34	23	5		5	5		2	7
May 6, 1872			126	702	828	do	62	7	69	9	11	1	4	25	28				5		2	7
July 29, 1872			140	699	839	do	63	6	69	3	3		4	10	28				6		3	9
Oct. 21, 1872			153	722	875	do	66	6	72	6	1	1	3	11	29				6		3	9
Jan. 18, 1873			151	727	878	do	66	7	73	3	4	1	2	10	21				6		3	9
Apr. 7, 1873			148	751	899	do	68	6	74	10	2	2	1	15	21	1		1	5		4	9
June 30, 1873			174	759	933	do	71	5	76	3	3	1		7	24				8		2	10
Sept. 22, 1873			181	784	965	do	71	6	77	7	5			12	24	1		1	7		2	9
Dec. 15, 1873			193	761	954	do	72	5	77	8	5	1	4	18	25	1		1	7		2	9
Mar. 9, 1874			199	775	974	Moderate	73	5	78	7	7	1	2	17	24				7		2	9
June 1, 1874			203	781	984	Good	74	4	78	5	2	1	3	11	25				7		2	9
Aug. 24, 1874			194	800	994	Moderate	74	5	79	19	9		7	35	27				6		2	8
Nov. 16, 1874			190	828	1,018	do	75	8	83	20	13	2	4	39	26				6		2	8
Feb. 8, 1875			181	834	1,015	Good	75	9	84	10	13	2	2	27	24				7		2	9

May 3, 1875	.....	.....	186	844	1,030	....do	74	10	84	14	14	6	7	41	22	.....	.....	.....	6	.....	2	8
July 26, 1875	.....	.....	190	843	1,033	....do	74	9	83	14	13	7	5	39	22	.....	.....	.....	6	.....	2	8
Oct. 18, 1875	.....	.....	190	866	1,056	Moderate	75	11	86	18	17	9	5	49	20	2	.....	2	6	.....	2	8
Jan. 10, 1876	.....	.....	187	871	1,058	....do	74	11	85	22	28	5	2	57	20	1	.....	1	5	.....	2	7
Apr. 3, 1876	.....	.....	194	888	1,082	....do	73	13	86	22	27	10	9	78	21	3	.....	3	6	.....	2	8
June 26, 1876	6	2	194	901	1,095	....do	77	12	89	18	16	5	5	44	22	.....	.....	.....	7	.....	2	9
Sept. 18, 1876	4	1	191	924	1,115	Bad and lock-out	69	23	92	76	56	13	35	180	23	.....	112	112	7	.....	2	9
Dec. 11, 1876	1	1	192	938	1,130	....do	73	19	92	75	61	20	34	188	25	26	101	127	8	.....	2	10
Mar. 5, 1877	9	4	196	935	1,131	....do	73	19	92	75	68	20	44	207	23	46	94	140	7	.....	2	9
May 28, 1877	7	1	185	946	1,131	Moderate	79	13	92	41	61	17	28	137	27	15	80	95	8	.....	2	10
Aug. 20, 1877	8	3	199	943	1,142	....do	79	13	92	42	49	24	25	140	29	14	59	73	8	.....	2	10
Nov. 12, 1877	19	.....	185	952	1,137	Bad	74	18	92	59	72	34	39	204	30	51	64	115	11	.....	2	13
Feb. 4, 1878	9	1	182	949	1,131	....do	78	26	94	92	91	50	72	305	31	159	57	216	12	.....	2	14
Apr. 29, 1878	16	1	197	948	1,145	....do	74	19	93	76	82	38	70	266	36	95	91	186	12	.....	2	14
July 22, 1878	7	3	198	956	1,154	Moderate	81	12	93	38	49	30	48	165	34	40	55	95	13	.....	2	15
Oct. 14, 1878	9	4	196	953	1,149	Bad	71	22	93	73	82	48	69	272	31	116	50	166	13	.....	2	15
Jan. 6, 1879	12	4	192	958	1,150	....do	58	30	88	106	106	62	82	358	33	218	49	267	15	.....	2	17
Mar. 31, 1879	4	5	196	964	1,160	....do	61	28	89	106	128	58	92	384	34	200	98	298	15	.....	3	18
June 23, 1879	2	1	195	969	1,164	....do	75	14	89	84	63	24	65	186	33	68	45	113	15	.....	3	18
Sept. 15, 1879	7	2	198	963	1,161	....do	60	29	89	62	102	43	84	291	34	176	43	219	16	.....	3	19
Dec. 8, 1879	7	3	192	957	1,149	....do	46	44	90	197	194	97	144	632	40	348	228	576	18	.....	3	21
Mar. 1, 1880	19	3	174	959	1,133	....do	55	33	88	128	133	72	122	450	40	172	152	324	7	.....	.....	7
May 24, 1880	35	2	158	950	1,108	....do	61	26	87	91	96	67	119	373	51	107	82	189	7	.....	.....	7
Aug. 16, 1880	28	4	143	931	1,174	....do	67	20	87	43	71	40	295	249	49	55	36	91	7	.....	2	9
Nov. 8, 1880	17	.....	129	932	1,061	....do	50	37	87	81	109	72	118	380	50	162	49	211	7	.....	2	9
Jan. 31, 1881	21	1	137	930	1,067	....do	50	39	89	71	94	70	112	347	50	158	36	194	7	.....	3	10
Apr. 25, 1881	16	1	154	914	1,068	Improving	59	29	88	32	42	34	58	166	46	60	28	88	7	.....	3	10
July 18, 1881	102	3	148	886	1,034	Good	68	19	87	21	27	20	60	128	58	18	.....	18	7	.....	4	11
Oct. 10, 1881	25	.....	164	862	1,026	Declining	66	21	87	41	56	36	78	111	58	59	5	64	7	.....	4	11
Jan. 2, 1882	17	1	173	870	1,043	Moderate	54	34	88	54	73	39	77	242	76	124	5	129	7	.....	3	10
Mar. 27, 1882	28	6	156	855	1,011	....do	60	28	88	35	55	36	71	197	60	66	5	71	7	.....	6	13
June 19, 1882	12	3	106	899	1,045	Good	69	20	89	11	35	22	63	131	61	18	3	21	7	.....	9	16
Sept. 11, 1882	35	1	127	887	1,014	Moderate	67	20	87	28	48	25	65	161	55	34	3	37	7	.....	9	16
Dec. 4, 1882	20	5	132	882	1,014	....do	64	24	88	26	42	35	68	171	57	54	2	56	9	2	7	18
Feb. 26, 1883	13	1	123	905	1,028	....do	70	16	86	27	42	25	73	165	55	45	.....	45	6	3	10	19
May 21, 1883	8	1	126	978	1,104	Good	72	15	87	30	39	15	44	128	49	39	.....	39	6	3	10	19
Aug. 13, 1883	19	1	129	1,035	1,164	....do	73	15	88	25	25	15	40	105	52	15	1	16	6	3	10	19
Nov. 5, 1883	8	7	184	1,098	1,227	Moderate	66	27	93	68	61	28	66	223	47	147	.....	147	6	3	10	19
Jan. 28, 1884	4	2	154	1,142	1,296	....do	70	24	94	40	51	22	61	174	42	56	1	57	5	4	10	19
Apr. 21, 1884	7	2	171	1,166	1,337	....do	72	25	97	31	53	30	76	190	45	71	.....	71	5	2	11	18
July 14, 1884	5	1	171	1,178	1,349	Good	76	22	98	24	35	28	72	159	42	43	1	44	5	5	11	21
Oct. 6, 1884	18	3	180	1,235	1,415	Bad	74	27	101	45	73	88	88	239	42	118	1	119	5	6	14	25
Dec. 29, 1884	15	4	189	1,232	1,421	Moderate	67	34	101	65	82	49	109	305	41	141	.....	141	5	14	7	26
Mar. 23, 1885	15	3	210	1,254	1,464	....do	76	24	100	45	79	39	86	249	42	116	.....	116	5	8	15	28
June 15, 1885	13	2	208	1,291	1,499	Good	80	21	101	24	39	18	56	137	44	28	.....	28	7	6	14	27
Sept. 7, 1885	2	5	219	1,331	1,550	Moderate	75	27	102	34	39	24	59	156	42	42	.....	42	7	6	13	26
Nov. 30, 1885	7	4	229	1,349	1,578	Bad	50	51	101	111	127	61	183	432	45	255	.....	255	7	8	13	28
Feb. 22, 1886	26	9	230	1,347	1,577	....do	64	39	103	90	95	55	112	352	44	251	.....	251	7	8	13	28
May 17, 1886	27	4	221	1,263	1,484	Moderate	70	27	97	36	59	21	86	202	40	98	.....	98	5	8	13	26
Aug. 9, 1886	26	1	215	1,368	1,583	Bad	66	39	105	46	61	33	96	236	49	122	.....	122	7	14	8	29
Nov. 1, 1886	27	.....	217	1,368	1,585	Lock-out	46	57	103	191	198	77	152	618	56	394	81	475	8	8	14	30
Jan. 24, 1887	58	2	205	1,337	1,542	....do	36	66	102	281	251	97	167	796	59	298	366	664	9	9	14	32

The recent amount and manner of keeping the moneys of the Society will appear from the annexed table:

Amount of the Society's funds January 24, 1887.

Districts, etc.	Banks.	Totals.	Treasurers' balances.	Amounts invested.
		£ s. d.	£ s. d.	£ s. d.
The general fund	Leeds Bank—Messrs. Wm. Wms. Brown & Co.—No. 1.	1,000 0 0	....	1,000 0 0
	Leeds and County Bank, limited, Castleford—No. 1.	1,000 0 0	....	1,000 0 0
	Leeds Old Bank—Messrs. Beckett & Co.—No. 5.	1,000 0 0	....	1,000 0 0
Castleford	Yorkshire Banking Co., Pontefract	1 1 0	149 18 8	150 19 8
Swinton	Sheffield Banking Co., Mexbro'	0 15 5	47 5 11	48 1 4
Hunslet	Leeds Old Bank—Messrs. Beckett & Co.	0 1 8	57 12 8	79 14 4
Thornhill Lees	West Riding Union Banking Co., Dewsbury.	1 8 6	11 0 6	12 9 0
Ferrybridge	Yorkshire Banking Co., Pontefract	....	88 18 8½	88 18 8½
Wakefield	West Riding Bank, Wakefield	5 16 6	12 18 6½	18 15 0½
Barnsley	Wakefield and Barnsley Union Bank, Barnsley.	32 9 0	33 8 0½	65 17 0½
Conisbro'	Post-Office Savings-Bank	6 8	34 8 9	34 15 5
Masbro'	Sheffield and Rotherham Joint Stock Banking Co., Rotherham.	46 15 0	13 17 1	60 12 1
Kilnhurst	Sheffield Banking Co., Mexbro'	4 10 10	17 1 0½	21 11 10½
Stairfoot		1 0 0	23 11 6½	24 11 6½
Shirehampton	Closed	....	....	....
Blaydon-on-Tyne	Building Societies and the Newcastle and Shields Bank.	460 0 0	40 16 0	500 16 0
Newport	National Bank of Wales	144 0 0	15 11 5	159 11 5
Central Account	Leeds and County Bank, Castleford	90 15 11	308 3 10½	398 19 9½
	Total	3,789 0 6	816 7 4	4,605 7 10

In the words of the report, it may be added that—

The yearly table or balance sheet for 1886 represents a total income of £5,586 10*s.* 8½*d.*, which has been derived from the following sources:

	£	*s.*	*d.*
Contributions	2,845	13	3
Levies	1,929	0	3
Entrance fees and fines	148	12	2
Bank interest	321	16	10
Grants from the other glass-bottle-making districts	278	..	..
Subscriptions from the miners, etc. (Barnsley district)	57	8	3½
Sundries	11	18	11

The total expenditure is £9,576 9*s.* 6½*d.*, which includes £6,019 18*s.* paid as donations, etc., to unemployed members; £2,008 14*s.* 8*d.* paid to members locked out; superannuation benefit, funerals, widows, and distressed members, £862 7*s.*; Stairfoot law proceedings, £73 0*s.* 3½*d.*, and other administration expenses, which include grants to other districts and philanthropic institutions, amounting to £117 10*s.* Suffice it now to say that the year commenced with a balance of £8,595 6*s.* 8*d.*, and ended with £4,605 7*s.* 10*d.*; consequently, the expenditure has exceeded the income during last year by £3,989 18*s.* 10*d.*

There is given below a detailed view of amounts contributed as by an active member during one hundred quarters of twelve weeks each, beginning in 1864, or from January 21, 1864, to January 25, 1887.

Rate of journeymen's payments for the last hundred quarters.

Quarters.	Contributions.	Levies.							Total payments required.
		Widows' benefit, per 24th rule.	Per 3d resolution, page 42, Dec. report, 1867.	Per 6th resolution, page 240, vol. III.	Per 7th resolution, page 540, vol. V.	Per 6th resolution, page 544, vol. VII.	Per resolution of D. M., Feb. 21, 1880.	Per resolution, page 348, vol. VIII.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Apr. 16, 1864..	0 12 0	.....	.....	.....	.....	.....	.....	.....	0 12 0
July 11, 1864..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Oct. 3, 1864..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Dec. 26, 1864..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Mar. 20, 1865..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
June 12, 1865..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Sept. 4, 1865..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Nov. 27, 1865..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Feb. 19, 1866..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
May 14, 1866..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Aug. 6, 1866..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Oct. 29, 1866..	12 0	0 2 0	.....	.....	.....	.....	.....	.....	14 0
Jan. 21, 1867..	12 0	2 0	.....	.....	.....	.....	.....	.....	14 0
Apr. 15, 1867..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
July 8, 1867..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Sept. 30, 1867..	12 0	1 0	.....	.....	.....	.....	.....	.....	13 0
Dec. 23, 1867..	12 0	.....	0 14 0	.....	.....	.....	.....	.....	6 0
Mar. 16, 1868..	12 0	2 0	1 4 0	.....	.....	.....	.....	.....	1 18 0
June 8, 1868..	12 0	.....	1 4 0	.....	.....	.....	.....	.....	1 16 0
Aug. 31, 1868..	12 0	.....	1 4 0	.....	.....	.....	.....	.....	1 16 0
Nov. 28, 1868..	12 0	1 0	.....	.....	.....	.....	.....	.....	13 0
Feb. 15, 1869..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
May 10, 1869..	12 0	.....	.....	.....	.....	.....	.....	.....	12 0
Aug. 2, 1869..	19 2	1 0	.....	.....	.....	.....	.....	.....	13 2
Oct. 25, 1869..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Jan. 17, 1870..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Apr. 11, 1870..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
July 4, 1870..	12 2	2 0	.....	.....	.....	.....	.....	.....	14 2
Sept. 26, 1870..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Dec. 19, 1870..	12 2	3 0	.....	.....	.....	.....	.....	.....	15 2
Mar. 13, 1871..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
June 5, 1871..	12 2	2 0	.....	.....	.....	.....	.....	.....	14 2
Aug. 28, 1871..	12 2	2 0	.....	.....	.....	.....	.....	.....	14 2
Nov. 20, 1871..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Feb. 12, 1872..	12 2	1 0	.....	.....	.....	.....	.....	.....	13 2
May 6, 1872..	12 2	1 0	.....	0 4 0	.....	.....	.....	.....	17 2
July 29, 1872..	12 2	.....	.....	4 0	.....	.....	.....	.....	16 2
Oct. 21, 1872..	12 2	1 0	.....	4 0	.....	.....	.....	.....	17 2
Jan. 13, 1873..	12 2	2 0	.....	4 0	.....	.....	.....	.....	18 2
Apr. 7, 1873..	12 2	.....	.....	4 0	.....	.....	.....	.....	16 2
June 30, 1873..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Sept. 22, 1873..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Dec. 15, 1873..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Mar. 9, 1874..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
June 1, 1874..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Aug. 24, 1874..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Nov. 16, 1874..	12 2	.....	.....	.....	.....	.....	.....	.....	12 2
Carried forward	23 8 0	1 3 0	4 6 0	1 0 0	.....	.....	.....	.....	34 17

Rate of journeymen's payments for the last hundred quarters—Continued.

Quarters.	Contributions.	Levies.								Total payments required.
		(1) Widows' benefits.	(2) Donations.‖	(3) Scotch levy. —	(4) Thornhill and Conisbro' lock-out.	(5) Scotch levy.	(6) Donations.	(7) Benevolent levy.	(8) Fires out and repairs.	
Brought forward.	£ s. d. 28 8 0	£ s. d. 1 8 0	£ s. d. 4 6 0	£ s. d. 1 0 0	£ s. d. 0 0 0	£ s. d. 0 0 0	£ s. d. 0 0 0	£ s. d. 0 0 0	£ s. d. 0 0 0	£ s. d. 34 17 0
Feb. 8, 1875	12 2	.....	.....	.....	.....	.....	.....	.....	.....	0 12 2
May 3, 1875	12 2	.....	.....	.....	.....	.....	.....	.....	.....	0 12 2
July 26, 1875	12 2	.....	.....	.....	.....	.....	.....	.....	.....	0 12 2
Oct. 18, 1875	12 2	.....	.....	.....	.....	.....	.....	.....	.....	0 12 2
Jan. 10, 1876	12 2	.....	.....	.....	.....	.....	.....	.....	.....	0 12 2
April 3, 1876	12 2	.....	.....	.....	.....	.....	.....	.....	.....	0 12 2
June 26, 1876	12 2	.....	.....	.....	.....	.....	.....	.....	.....	0 12 2
Sept. 18, 1876	12 2	.....	.....	.....	0 16 0	.....	.....	.....	.....	1 8 2
Dec. 11, 1876	12 2	.....	.....	.....	1 4 0	.....	.....	.....	.....	1 16 2
Mar. 5, 1877	12 2	.....	.....	.....	1 4 0	.....	.....	.....	.....	1 16 2
May 28, 1877	12 2	.....	.....	.....	1 4 0	.....	.....	.....	.....	1 16 2
Aug. 20, 1877	12 2	.....	.....	.....	1 4 0	.....	.....	.....	.....	1 16 2
Nov. 12, 1877	12 2	.....	.....	.....	1 4 0	.....	.....	.....	.....	1 16 2
Feb. 4, 1878	12 2	.....	.....	.....	1 4 0	.....	.....	.....	.....	1 16 2
Apr. 29, 1878	12 2	.....	.....	.....	1 4 0	.....	.....	.....	.....	1 16 2
July 22, 1878	12 2	.....	.....	.....	1 4 0	.....	.....	.....	.....	1 16 2
Oct. 14, 1878	12 2	.....	.....	.....	0 16 0	.....	.....	.....	.....	1 8 2
Jan. 6, 1879	12 2	.....	.....	.....	0 12 0	.....	.....	.....	.....	1 4 2
Mar. 31, 1879	12 2	.....	.....	.....	0 12 0	.....	.....	.....	.....	1 4 2
June 23, 1879	12 2	.....	.....	.....	0 12 0	.....	.....	.....	.....	1 4 2
Sept. 15, 1879	12 2	.....	.....	.....	0 12 0	0 6 0	.....	.....	.....	1 10 2
Dec. 8, 1879	12 2	.....	.....	.....	0 12 0	0 6 0	.....	.....	.....	1 10 2
Mar. 1, 1880	12 2	.....	.....	.....	0 12 0	0 6 0	.....	.....	.....	1 10 2
May 24, 1880	12 2	.....	.....	.....	0 12 0	0 6 0	0 6 0	.....	.....	1 16 2
Aug. 16, 1880	12 2	.....	.....	.....	0 12 0	.....	0 4 0	.....	.....	1 8 2
Nov. 8, 1880	12 2	.....	.....	.....	0 12 0	.....	.....	.....	.....	1 4 2
Jan. 31, 1881	12 2	.....	.....	.....	0 12 0	.....	.....	.....	.....	1 4 2
Apr. 25, 1881	12 2	.....	.....	.....	0 12 0	.....	.....	.....	.....	1 4 2
July 18, 1881	12 2	.....	.....	.....	0 4 0	.....	.....	.....	.....	0 16 2
Oct. 10, 1881	12 2	.....	.....	.....	.....	.....	.....	.....	.....	6 12 2
Jan. 2, 1882	12 2	.....	.....	.....	.....	.....	.....	.....	.....	0 12 2
Mar. 27, 1882	12 2	.....	.....	.....	.....	.....	.....	.....	.....	0 12 2
June 19, 1882	12 2	.....	.....	.....	.....	.....	.....	0 0 6	.....	0 12 8
Sept. 11, 1882	12 2	.....	.....	.....	.....	.....	.....	0 0 6	.....	0 12 8
Dec. 4, 1882	12 2	.....	.....	.....	.....	.....	.....	0 1 0	.....	0 13 2
Feb. 26, 1883	12 2	.....	.....	.....	.....	.....	.....	0 0 6	.....	0 12 8
May 21, 1883	12 2	.....	.....	.....	.....	.....	.....	0 0 6	.....	0 12 8
Aug. 13, 1883	12 2	.....	.....	.....	.....	.....	.....	0 0 6	.....	0 12 8
Nov. 5, 1883	12 2	.....	.....	.....	.....	.....	.....	0 0 6	.....	0 12 8
Jan. 28, 1884	12 2	.....	.....	.....	.....	.....	.....	0 0 6	.....	0 12 8
Apr. 21, 1884	12 2	.....	.....	.....	.....	.....	.....	0 0 6	.....	0 12 8
July 14, 1884	12 2	.....	.....	.....	.....	.....	.....	0 0 6	0 3 0	0 15 8
Oct. 6, 1884	12 2	.....	.....	.....	.....	.....	.....	0 0 6	0 3 0	0 15 8
Dec. 29, 1884	12 2	.....	.....	.....	.....	.....	.....	0 0 6	0 3 0	0 15 8
Carried forward.	55 8 4	1 3 0	4 6 0	1 0 0	18 0 0	1 4 0	0 10 0	0 6 6	0 9 0	82 1 10

Rate of journeymen's payments for the last hundred quarters—Continued.

Quarters.	Contributions.	Levies. (1) Widows' benefit.	(2) Donations.	(3) Scotch levy.	(4) Thornhill and Conisbro' lock-out.	(5) Scotch levy.	(6) Donations.	(7) Benevolent levy.	(8) Fires out and repairs.	(9) Scotch lock-out.	(10) Fires out, etc.	(11) Dublin lock-out.	(12) Schumann's testimonial.	(13) Financial position.	(14) Financial position.	Total payments required.
Brought forward	£ s. d. 55 3 4	£ s. 1 3	£ s. 4 6	£ s. 1 0	£ s. 18 0	£ s. 1 4	s. 10	s. d. 6 6	£ s. 0 9	s. d. 0 0	s. d. 0 0	s. d. 0 0	s. d. 0 0	s. d. 0 0	s. d. 0 0	£ s. d. 83 1 10
Mar. 23, 1885	0 12 2	.....	.....	.....	.....	.....	.....	0 6	0 2	.....	.....	.....	.....	.....	.....	0 15 8
June 15, 1885	0 12 2	.....	.....	.....	.....	.....	.....	0 6	0 2	4 6	.....	.....	.....	.....	.....	1 0 2
Sept. 7, 1885	0 12 2	.....	.....	.....	.....	.....	.....	0 6	0 2	.....	.....	.....	.....	.....	.....	0 15 8
Nov. 30, 1885	0 12 0	.....	.....	.....	.....	.....	.....	.....	0 2	.....	2 0	.....	.....	.....	.....	0 17 0
Feb. 22, 1886	0 12 0	.....	.....	.....	.....	.....	.....	.....	0 2	.....	3 0	.....	.....	.....	.....	0 18 0
May 17, 1886	0 12 0	.....	.....	.....	.....	.....	.....	.....	0 2	.....	3 0	.....	.....	.....	.....	0 18 0
Aug. 9, 1886	0 12 0	.....	.....	.....	.....	.....	.....	.....	0 2	.....	3 0	2 6	.....	.....	.....	1 0 6
Nov. 1, 1886	0 12 0	.....	.....	.....	.....	.....	.....	.....	0 2	.....	3 0	.....	0 6	4 0	4 0	1 6 6
Jan. 24, 1887	0 12 0	.....	.....	.....	.....	.....	.....	.....	0 2	.....	3 0	.....	.....	6 0	12 0	1 16 0
Total.....	60 11 10	1 3	4 6	1 0	18 0	1 4	10	8 0	1 16	4 6	17 0	2 6	0 6	10 0	16 0	91 9 4

The report goes on to say:

An examination of the table will show that in 1867-'68 the members were levied 2*s.* a week in addition to the ordinary contribution of 1*s.* a week, which was continued for forty-three weeks, in order to pay the out-of-work members 9*s.* a week during that depression of trade. The out-of-work allowance was at that time raised from 5*s.* per week.* The next extraordinary levy that took place was from 1876 to 1881, which arose through the lock-out at Thornhill Lees and Conisbro'. That lock-out commenced from July 29, 1876. But, reckoning from the previous quarter-day, June 26, 1876, the levy covered a period of five and a half years, as it was continued until July, 1881. This period gives 276 weeks, and the average rate of payment was 2*s.* 4½*d.* per week. The total amount of payment for a working member during this period was £32 16*s.* 4*d.* The next extraordinary levy commenced on September 6, 1886, which is still in operation. On January 24, 1887, quarter-day, the rate of payment was 3*s.* a week. A levy of 3*s.* per quarter was put on, commencing from April 21, 1884, in order to provide for paying members donation when they lost work through "fires out for repairs," etc. This was found insufficient to keep up the funds, and an additional 3*s.* per quarter was put on, commencing from October 5, 1885. This addition was found inadequate to keep up a reserve fund, and the 1*s.* 6*d.* rate per week, including contributions, was raised to 2*s.*, which commenced on September 6, 1886. Afterward the rate was increased to 3*s.* a week, commencing from October 4, 1886. It will be seen by the table that the 3*s.* rate of payment had been in operation sixteen weeks on January 24, 1887.

The following table shows the amount paid by a working member for the twenty-three years under the various resolutions passed, including the ordinary contributions of 1*s.* a week:

	£.	s.	d.
Contributions	60	11	10
(1) Widows' levies	1	3	0
(2) Donations	4	6	0
(3) Scotch lock-out	1	0	0
(4) Thornhill and Conisbro' lock-out	18	0	0
(5) Scotch lock-out	1	4	0
(6) Decreasing funds	0	10	0
(7) Benevolent fund	0	8	0
(8) Fires out	1	16	0
(9) Scotch lock-out	0	4	6
(10) Fires out	0	17	0
(11) Dublin lock-out	0	2	6
(12) Mr. Schumann's testimonial	0	0	6
(13) Decreasing funds	0	10	0
(14) Decreasing funds	0	16	0
Total	91	9	4

* Quarterly delegate meeting, August 18, 1866.—A. G.

The total payment for the 1,200 weeks, or twenty-three years and one month, is £91 9*s.* 4*d.*, and the weekly average is 1*s.* 6¼*d.*

The strain which has been put on the members at certain periods, in order to keep up the funds and provide for members' claims, is certainly extraordinary; and many have found it difficult to raise enough money to settle their accounts at the end of the quarters, especially of late, not only in consequence of their reduced earnings when in work, but also on account of having been out of work in the winter months for several years past. Members are more subject to be out of work during the winter now than they were formerly. This is consequent, in a great measure, on the revolutionary changes that have overtaken the glass-bottle trade and other businesses on which it mainly depends. But notwithstanding the many difficulties which have presented themselves, a large number of members have made strenuous efforts to pay all demands, and thereby keep themselves in benefits, not knowing how soon they might be receivers. Such are deserving of sympathy.

As serving further to elucidate the working of the society, I annex:

Number of journeymen excluded and the amount of arrears written off since 1878.

Quarters.	No. of accounts.	Amounts of arrears.	Quarters.	No. of accounts.	Amounts of arrears.
		£ *s.* *d.*			£ *s.* *d.*
January 6, 1879	13	25 9 11	May 21, 1883	32	14 11 2
March 31, 1879	9	12 1 10	August 18, 1883	18	22 6 1
June 23, 1879	3	2 17 0	November 5, 1883	15	17 2 9
September 15, 1879	9	7 1 8	January 28, 1884	52	6 19 2
December 8, 1879	11	19 4 8	April 21, 1884	26	37 8 2
March 1, 1880	22	19 6 0	July 14, 1884	6	6 11 5
May 24, 1880	37	15 1 6	October 6, 1884	20	43 11 0
August 16, 1880	32	27 4 9	December 29, 1884	19	26 0 8
November 8, 1880	18	22 14 1	March 23, 1885	19	29 19 4
January 31, 1881	22	42 5 5	June 15, 1885	15	34 10 0
April 25, 1881	17	20 12 8	September 7, 1885	11	12 14 11
July 18, 1881	105	236 11 11	November 30, 1885	10	13 2 8
October 10, 1881	36	72 6 5	February 22, 1886	35	96 2 1
January 2, 1882	18	25 19 9	May 17, 1886	31	91 14 0
March 27, 1882	10	65 19 4	August 7, 1886	27	100 10 9
June 19, 1882	15	13 18 2	November 1, 1886	27	77 6 7
September 11, 1882	36	82 9 8	January 24, 1887	60	115 9 8
December 4, 1882	6	54 7 8			
February 11, 1883	8	14 19 4	Total	852	1,550 17 10

In comment upon these figures the report continues:

This table shows that during a period of eight years 852 accounts have been written off, and the amount of arrears written off, which has been get-at-able is £1,550 17*s.* 10*d.* The number of accounts written off during the last four quarters is 145, and the amount of arrears is £335 0*s.* 7*d.* Bitter are the complaints and loud the protestations against the existing state of things, not only as regards the society as an organization, but also against the circumstances of the trade; and varied are the causes which are assigned for the changes which have taken place. But it is not every one who is competent to solve the problem. Every one, however, is bound to see and confess, if needs be, that the above table is an index to one of the causes which have contributed towards changes complained of.

The methods of investment of some of the surplus funds of the society since the formation of the general fund in the fall of 1873 may be seen in the statement set forth below. In November of that year £6,000 seem to have been placed at interest at 4 per cent., half of the amount having been lent to bankers and half to the borough of Leeds. Further sums were added afterwards; but as the final result there remained on deposit after January 1, 1887, a total amount of £3,000, drawing interest as to £1,000 at the rate of 4 per cent. per annum, and as to £2,000 at the rate of 3 per cent., with a total amount of interest shown as having accrued during the interval of £4,003 7*s.* 5*d.* This is certainly not a very gratifying exhibit.

Investments in the general fund and the amount of interest received, etc., from the formation of the general fund to January 24, 1887.

No. of deposits.	Places where invested.	Dates when invested.	Amounts invested.	Rates of interest.	Amount of interest received and when due.					
					1874.	1875.		1876.		
					July 1.	Jan. 1.	July 1.	Jan. 1.	July 1.	
			£	p.ct	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
1	Leeds and County Bank.....	Nov. 15, 1873	1,000	4	.....	44 16 5	19 14 6	20 0 0	20 5 6	
2	Leeds Corporation.....	Nov. 22, 1873	1,000	4	24 2 7	19 16 8	19 16 8	19 16 8	19 15 10	
3	.....do.....	....do.....	1,000	4	24 2 7	19 16 8	19 16 8	19 16 8	19 15 10	
4	.....do.....	....do.....	1,000	4	24 2 7	19 16 8	19 16 8	19 16 8	19 15 10	
5	Leeds Bank (Brown's).....	....do.....	1,000	4	.....	44 5 5	19 16 6	20 3 6	20 0 0	
6	Leeds Old Bank (Beckett's)..	....do.....	1,000	4	.....	44 9 10	.....	40 0 0	20 0 0	
7	Leeds Bank (Brown's).....	Oct. 10, 1874	1,000	4	.....	8 19 9	19 16 6	20 3 6	20 0 0	
8	Leeds and County Bank.....	Oct. 17, 1874	1,000	3½	.....	8 10 0	18 10 0	18 15 0	19 0 0	
9	.....do.....	....do.....	1,000	3½	.....	7 14 2	18 10 0	18 15 0	19 0 0	
10	.....do.....	....do.....	1,000	3½	.....	7 14 2	18 10 0	18 15 0	19 0 0	
11	Leeds Old Bank (Beckett's)..	July 1, 1868	1,000	4	.....	.....	.....	.....	.....	
12	.....do.....	July 1, 1876	1,000	4	.....	.....	.....	.....	.....	
13	Leeds Bank (Brown's).....	July 1, 1878	1,000	4	.....	.....	.....	.....	.....	
14	Leeds Old Bank (Beckett's)..	Jan. 1, 1878	1,000	4	.....	.....	.....	.....	.....	
15	.....do.....	....do.....	1,000	4	.....	.....	.....	.....	.....	
16	Leeds Bank (Brown's).....	....do.....	1,000	4	.....	.....	.....	.....	.....	
	Total	.....	16,000	....	72 7 9	236 0 3	174 7 6	216 2 0	196 13 0	

NOTE.—Nos. 2, 3, and 4 deposits of November 22, 1873, in the Leeds Corporation, were withdrawn January 1, 1878, two of which were re-invested in the Leeds Old Bank, and one in the Leeds Bank, January 1, 1878. See page 267, Vol. VI, for information relative to these deposits.

No. of deposits.	Amount of interest received and when due.											
	1877.				1878.				1879.			
	January 1.			July 1.	January 1.			July 1.	January 1.			July 1.
	£ s. d.			£ s. d.	£ s. d.			£ s. d.	£ s. d.			£ s. d.
1	20 0 0			20 0 0	20 0 0			20 0 0	20 0 0			20 0 0
2	19 15 0			19 15 0	19 15 0			Withdrawn Jan. 1, 1878				
3	19 15 0			19 15 0	19 15 0			" " "				
4	19 15 0			19 15 0	19 15 0							
5	20 0 0			20 0 0	20 0 0			20 0 0	20 0 0			20 0 0
6	20 0 0			20 0 0	20 0 0			20 0 0	20 0 0			17 14 6
7	20 0 0			20 0 0	20 0 0			20 0 0	20 0 0			20 0 0
8	18 15 0			18 15 0	18 15 0			18 15 0	18 15 0			18 15 0
9	18 15 0			18 15 0	18 15 0			18 15 0	18 15 0			18 15 0
10	18 15 0			18 15 0	18 15 0			18 15 0	18 15 0			18 15 0
11	20 0 0			20 0 0	20 0 0			20 0 0	20 0 0			17 14 6
12	20 0 0			20 0 0	20 0 0			20 0 0	20 0 0			17 14 6
13	20 0 0			20 0 0	20 0 0			20 0 0	20 0 0			20 0 0
14	.....			.....	.....			20 0 0	20 0 0			17 14 6
15	.....			.....	.....			20 0 0	20 0 0			17 14 6
16	.....			.....	.....			20 0 0	20 0 0			20 0 0
Total	255 10 0			255 10 0	255 10 0			256 5 0	256 5 0			244 17 6

Investments in the general fund, etc.—Continued.

No. of deposits.	Amount of interest received and when due.											
	1880.				1881.				1882.			
	January 1.		July 1.		January 1.		July 1.		January 1.		July 1.	
	£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.	
1	20 0 0		20 0 0		20 0 0		20 0 0		20 0 0		20 0 0	
2												
3												
4												
5	20 0 0		20 0 0		20 0 0		20 0 0		17 17 9		15 0 0	
6	20 0 0		3 17 3		Withdrawn Feb. 16, 1880.							
7	20 0 0		20 0 0		20 0 0		20 0 0		17 17 9		15 0 0	
8	14 9 10		Withdrawn Nov. 17, 1879.									
9	18 15 0		7 18 2		Withdrawn Mar. 19, 1880.							
10	18 15 0		1 4 3		Withdrawn Jan. 12, 1880.							
11	20 0 0		20 0 0		20 0 0		20 0 0		15 0 0		15 0 0	
12	17 12 10		Withdrawn Dec. 18, 1879.									
13	13 18 6		Withdrawn Nov. 5, 1879.									
14	20 0 0		20 0 0		20 0 0		20 0 0		15 0 0		15 0 0	
15	20 0 0		20 0 0		20 0 0		20 0 0		15 0 0		15 0 0	
16	12 7 8		Withdrawn Oct. 22, 1879.									
Total	225 18 10		132 19 8		120 0 0		120 0 0		100 15 6		95 0 0	

NOTE.—The following deposits were withdrawn: No. 16, October 22, 1879; No. 13, November 5, 1879; No. 8, November 17, 1879; No. 12, December 18, 1879; No. 1, January 12, 1880; No. 6, February 16, 1880; and No. 9, March 19, 1880.—A. G.

No. of deposits.	Amount of interest received and when due.											
	1883.				1884.				1885.			
	January 1.		July 1.		January 1.		July 1.		January 1.		July 1.	
	£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.	
1	20 0 0		20 0 0		20 0 0		20 0 0		20 0 0		20 0 0	
2												
3												
4												
5	15 0 0		15 0 0		15 0 0		15 0 0		15 0 0		15 0 0	
6												
7	15 0 0		15 0 0		15 0 0		15 0 0		15 0 0		15 0 0	
8												
9												
10												
11	15 0 0		15 0 0		15 0 0		15 0 0		15 0 0		15 0 0	
12												
13												
14	15 0 0		15 0 0		15 0 0		15 0 0		15 0 0		15 0 0	
15	15 0 0		15 0 0		15 0 0		15 0 0		15 0 0		15 0 0	
16												
Total	95 0 0		95 0 0		95 0 0		95 0 0		95 0 0		95 0 0	

Investments of the general fund, etc.—Continued.

No. of deposits.	Amount of interest received and when due.			Total amount of interest received.
	1886.		1887.	
	January 1.	July 1.	January 1.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	20 0 0	20 0 0	20 0 0	524 16 5
2				162 13 5
3				162 13 5
4				162 13 5
5	15 0 0	15 0 0	15 0 0	472 3 2
6				246 1 7
7	15 0 0	11 1 1	(*)	417 18 7
8				191 15 4
9				208 2 4
10				196 8 5
11	15 0 0	8 4 4	(*)	340 18 10
12				135 7 4
13				123 18 6
14	15 0 0	15 0 0	(*)	287 14 6
15	15 0 0	15 0 0	15 0 0	302 14 6
16				72 7 8
Total	95 0 0	84 5 5	50 0 0	4,008 7 5

*Withdrawn: No. 11, October 9, 1886; No. 7, November 27, 1886; and No. 14, January 1, 1887.

F. H. WIGFALL,
Consul.

UNITED STATES CONSULATE,
Leeds, November 12, 1887.

ENGLISH SHIP-BUILDING IN 1887.

REPORT BY CONSUL JONES.

It is a mere truism to say that elements of uncertainty enter largely into all the great trades and industries. Even the corn and coal trades are no exceptions to the rule. But ship-building and shipping demonstrate the proposition more fully and to greater extremes than any of the branches of commerce and manufacture. And it is even true that caprice in ship-building seriously affects the stability of the trades auxiliary to this great industry.

In 1883 the tonnage launched in the United Kingdom aggregated 1,250,000. It fell in a single year to 750,000, and again in 1885 to something over 500,000 tons. Moreover, whereas shipping was returning handsome, not to say extravagant, dividends between 1881 and 1883, it is, perhaps, not too much to say that the merchant navy of the world, taken as a whole, was carrying on the traffic of the world absolutely without profit during 1884, 1885, and 1886. In no other trade can we find such instances of bounds and rebounds, of unwholesome prosperity and crushing depression, as are illustrated by British shipping during the last decade.

The elements which accelerated, if they did not create, the overproduction of 1881, 1882, 1883 have been commented upon in previous reports by the writer hereof. Briefly recapitulated, they consisted of the active transition from wood to iron; the bounty system,

which set a premium upon ship-building and ship-owning by continental powers; the extraordinary profits yielded by cargo vessels, and the consequent rush of all sorts of people into the shipping trade. Men and boys having no knowledge whatever of shipping entered into business as managing ship-owners. They issued circulars setting forth in glowing colors the fabulous earnings in the trade. They readily induced capitalists, large and small, only less ignorant than themselves in the business, to invest their money in shipping to be controlled by them. Experienced and capable managing owners were compelled under this pressure to order tonnage, while convinced in their better judgment that the trade was being overdone. Builders were largely influenced by the fever. New yards grew up on the Clyde and on the northeast coast. The orders of incompetent men were executed with such safeguards as to payments as the shipbuilders could exact and provide for under the then existing condition of enterprise and competition, with the inevitable result of overproduction. Then followed ruinous freights, failures of builders, a "struggle for existence, and the survival of the fittest." During the bad years tonnage was sailed generally without profit, and often with positive loss, and the outputs from the yards tumbled down from 1,250,000 tons in 1883 to something like 480,000 tons in 1886!

The output of the last-mentioned year, namely, 1886, probably indicates the smallest amount of tonnage launched that we shall have to record for several years to come; and it is tolerably safe to assert that the period of prosperity has fairly set in for the builders and owners of British shipping.

The elements which have contributed toward the revival are, primarily, the comparatively small quantity of tonnage built since 1883; second, the large amount of tonnage removed from the register by wrecks, old age, and otherwise; third, the natural increase of the world's commerce requiring transportation. It is, perhaps, safe to assert that freight requiring transportation has quite overtaken the available tonnage; and it could be demonstrated that the position of shipping in this regard is superior now to what it was a dozen years ago. It is, however, beyond the scope of a report on shipbuilding to enter into statistics and calculations in support of that assertion. But to continue our recapitulation of the causes which have influenced the return of prosperity, we may state, fourth, that the transition, which is now taking place, from iron to steel is an important factor so far as ship-building is concerned, though it may bode an evil future for old ships; fifth, the writing down of the values of old tonnage materially improved the position and earnings of shipping. During February, or early last year, ship-owners decided to reduce the values, and, therefore, the cost of the insurance of their vessels by various sums, reaching, in many instances, as high as 50 per cent. From that time forward a fair proportion of ships have been declaring good dividends, reaching 15 per cent. in some cases within our knowledge. The very bountiful crop of wheat in Southern Russia and the Danubian provinces last summer drew away a large quantity of tonnage from the general traffic, and favorably influenced freights all round. Consequent upon these important factors confidence has returned to ship-owners, and cargo ships were largely built during the second half of last year; and, indeed, 1887 shows an increased output compared with 1886 of no less than 98,211 tons. Moreover, prices of both labor and material are

fast advancing; and the following table will indicate the extent of this advance during about four months of last year:

Prices of material.

Material.	1887. August 14.	1887. December 14.	Increase.	
			Per cent.	Per ton.
	£ s. d.	£ s. d.		£ s. d.
Steel plates	5 15 0	6 15 0	17.4	1 0 0
Iron plates	4 10 0	4 15 0	5.5	0 5 0
Copper	40 10 0	73 5 0	82.1	33 5 0
Tin	108 0 0	168 0 0	55.5	60 0 0
Galvanizing	4 2 6	4 10 0	9.1	0 7 6
Teak*	9 0 0	11 0 0	22.2	2 0 0
Yellow pine*	3 15 0	5 0 0	33.3	1 5 0

*Per load 50 cubic feet.

Under all these circumstances it is not surprising that ship-builders, who have certainly suffered largely during the depression, are no longer willing to work for the mere satisfaction of keeping their plant and their workmen in employment; they are standing out for a profit, and are getting it. Builders and owners alike are not liable soon to forget the terrible lesson taught them during the first three years of the present decade; capitalists will not readily again intrust their money and shipping property to incompetent and inexperienced managers; older firms will be more cautious in ordering tonnage; and builders will doubtless be more conservative and circumspect regarding the status of their clients. But notwithstanding these warnings from the bitter experience of the past there are even now indications of the overproduction of tonnage. No less than 119 vessels, aggregating 206,041 tons, are now on the stocks on the Clyde. This, it will be observed, shows 19,804 tons more than the entire output of 1887. Assuming, as we may perhaps fairly assume, that the work on the Tyne and throughout the northeast coast indicates a like or similar prosperity, we have, at once, ships on order representing a larger amount of tonnage than the total output of 1887. It is never safe and seldom wise to hazard a forecast of the future; but it is perhaps safe to say that more tonnage will be launched during 1888 than the British yards have turned out since the great ship-building year 1883.

The most remarkable feature with regard to ship-building in 1887 has been the advance of steel into public favor as a ship-building material. The writer of these pages, several years ago now, took the liberty to suggest to American builders that they should take the short cut from wood to steel. Even then indications were abundant pointing to the final triumph of the latter material; and, finally, its superiority in quality, in ductility, in buoyancy, has enabled it to outstrip almost entirely the older and coarser metal. The extent of this progress of steel will be appreciated when we point out that out of a total output during 1887 of 578,202 tons no less than 465,792 tons, or 80.55 per centum, were built of steel.

Another important feature showing the tendency in this great industry is the continued increase in the average size of merchant vessels. Some dozen years ago 2,000 tons dead weight was counted the normal size of a cargo vessel. In 1880 the average had advanced to

3,000 tons, while now 4,000 tons, or even more, represents the ordinary size of a British cargo ship.

A table is here inserted showing the average size of vessels built in the great ship-building centers of the United Kingdom. It is, however, necessary to point out that the average may be seriously influenced on any river or in any one firm by the building of one or more exceptionally small vessels; but notwithstanding that fact, especially as influencing the Clyde last year, it will be observed that the average has advanced 120 tons upon the preceding year.

Average size of vessels.

District.	1887.	1886.
	Tons.	*Tons.*
Belfast	2,580	1,626
West Hartlepool	2,415	1,668
The Wear	1,818	1,454
The Tees	1,606	1,944
The Tyne	1,400	1,285
The Clyde	593	1,089
Barrow	780	1,301

The tonnage built for foreign orders has certainly increased, and shows a gain upon the previous year of 55,094 tons, and indicates the largest quantity of tonnage launched on that account since 1883, when the total reached 189,098 tons.

Naval architects have turned their backs almost entirely upon the old material for the hulls of ships by the adoption of steel. With a similar spirit of enterprise marine engineers have developed the triple expansion engine until it has almost entirely superseded the compound type. The progress in marine engineering has been remarkable during recent years. All within the reign of the present Queen Victoria we have had the old "side-lever" engine, the "oscillating" engine, the "steeple" engine, the "trunk" engine, which latter came in with the adoption of the screw, then the "surface condenser," the "compound," the "triple expansion," and in its experimental stage the "quadruple expansion."

During 1882–'83 only about a dozen vessels were supplied with the triple expansion engine. The number had increased by the end of 1886 to 200 vessels supplied with the improved type of engine during that one year. A pressure of 150 or 160 pounds is at present employed and the consumption of good coal is estimated at 1½ pounds per indicated horse-power per hour. In round numbers it may be stated that the triple-expansion engine effects a saving of 20 per centum upon the best type of compound engine working with 80 or 90 pounds pressure.

Various other improvements have been introduced into ship-building during recent years, and especially during 1887, such as improved steering-gear, feed-water heaters, and, indeed, twin screws have even been adopted in many instances. For the royal navy twin screws are invariably adopted.

The tables which are incorporated in this report indicate a total output of 578,202 tons of shipping. The northeast coast district, extending from the Tees on the south to Blyth on the north, and including the Tyne and the Wear also, takes the first position in the quantity of tonnage produced by any one district with 284,920 tons.

The Clyde comes second with 186,237 tons. A table of comparison of output for these two great districts is here introduced:

Comparative figures for the northeast coast and the Clyde.

Districts.	No. of firms.	No. of vessels.	Tonnage.
Northeast coast	44	168	284,920
Clyde	51	317	186,237
Northeast coast, increase of tonnage compared with 1886			102,366
Clyde, increase of tonnage compared with 1886			13,763

An examination of the outputs of the different yards indicates that Messrs. Harland & Wolff, Belfast, show the largest aggregate of tonnage launched by any single yard, namely, 31,446 tons. The second place is occupied by Messrs. Russell & Co., on the Clyde, with an output of 27,035 tons, while Messrs. Sir William Armstrong, Mitchell & Co. take the third position, with nearly 25,000 tons; then follow Messrs. Stephen & Sons, on the Clyde, with nearly 23,000 tons, and Messrs J. L. Thompson & Sons, on the Wear, with close upon 22,000 tons.

The President's message has created a sensation among the more intelligent and cultured men in England engaged in the building and managing of ships, for while the message does not deal specifically with American shipping, the policy foreshadowed by the document leaves a general impression that free trade in ships—in the foreign trade, at all events—is contemplated. The general impression is, very naturally, perhaps, that free trade in ships would mean an immediate harvest for the builders, and those who have ships to sell in this country, while others, whom the writer certainly considers superior as economic scientists, are of the opinion that although the carrying out of the policy of the President might create temporary demands and temporary prosperity here, in the long run it would be a bad thing for the British ship-yards. A far-seeing gentleman, and a large ship-builder of wealth, in a letter to the writer of this paper, makes use of these words:

> If the States go in for free trade altogether, we English manufacturers will have very formidable rivals, so that from a selfish point of view I could wish them to remain as they are.

Without expressing any personal opinions, there would, perhaps, be no harm in saying that the views entertained by the most intelligent manufacturers of England are that, so long as the cost of plant, machinery, and the auxiliaries of manufacture is enhanced by the tariff, so long, also, will it be impossible for the United States to compete with England in any other market than its own.

There is another phase of the question which is certainly entitled to most serious consideration. Year after year American capitalists are investing their money in shares in shipping sailing under the British flag. Year after year the amount of tonnage owned by Americans in this way goes on increasing, and it is certainly worth while considering whether something can not be done to enable American capital to be invested in shipping that can carry the American flag. Our capitalists at the present time are compelled to pay more for a ship than a foreigner has to pay for his, and yet the foreigner is permitted to compete with the American, even in American ports,

upon absolutely even terms; the American being handicapped in the race to the extent of the excess he has to pay for his ship compared with the price paid by the foreign ship-owner for a similar vessel.

I feel that a consul has no right to express opinions unasked, especially regarding subjects that come within the province of the legislature of the country; but, having made shipping a special study for years, I experience some difficulty in maintaining silence while the flag is gradually, but surely disappearing from the high seas.

EVAN R. JONES,
Consul.

UNITED STATES CONSULATE,
Cardiff, January 4, 1888.

British ship-building, northeast coast.

TYNE.

Name of firm.	Tonnage produced.			Capacity of yard.
	1885.	1886.	1887.	
Sir W. Armstrong, Mitchell & Co	14,266	21,076	24,980	35,000
Palmer's Shipbuilding Company	25,057	20,798	19,824	70,000
C. S. Swan & Hunter	12,801	4,685	14,614	30,000
John Redhead & Co	12,941	6,987	13,614	25,000
R. and W. Hawthorn, Leslie & Co	11,385	14,469	10,573	30,000
Wigham, Richardson & Co	11,288	5,578	7,632	20,000
Tyne Iron Shipbuilding Company	3,569	3,417	4,944	17,000
William Dobson & Co	975	3,418	2,660	15,000
Wood, Skinner & Co	455	535	2,338	1,000
Schlesinger, Davis & Co	156	141	2,163	21,000
H. S. Edwards & Sons	7,226	936	640	12,000
Joseph T. Eltringham	750	526	499	3,000
Thomas and William Smith	189	201	226	10,000
Tyne General Ferry Company	.....	.....	77	300
Hepple & Co	361	310	.....	2,000
J. P. Rennoldson & Sons	278	141	.....	500
Campbell, Bowstead & Co	1,252	95	.....	16,000
Lawson & Eltringham	321	74	.....	500
J. R. Maxwell	264	.....	.....	800
J. and P. C. Winlo	71	.....	.....	250
Total	102,998	83,317	104,284	.....

THE WEAR.

Joseph L. Thompson & Sons	15,540	16,058	21,823	35,000
James Laing	11,616	14,064	17,809	30,000
Doxford & Sons	9,496	8,592	13,163	25,000
Short Bros	11,096	7,508	10,160	30,000
Sunderland Shipbuilding Company	1,867	2,412	5,245	30,000
Boolds, Sharer & Co	1,780	4,250	4,090	20,000
J. Blumer & Co	1,152	.....	2,863	20,000
Bartram, Haswell & Co	.....	2,515	2,745	14,000
Pickersgill & Sons	2,261	.....	2,733	12,000
Strand Shipway Company	.....	2,182	1,830	10,000
S. P. Austin & Sons	2,865	1,810	1,663	10,000
Osborne, Graham & Co	2,382	.....	1,150	15,000
R. Thompson & Sons	1,632	4,696	.....	25,000
North of England Shipbuilding Company, Limited	1,956	1,290	.....	12,000
Priestman & Co	845	1,000	.....	10,000
J. Knox & Co	320	.....	.....	.....
Total	64,760	61,399	85,214	.....

British ship-building, northeast coast—Continued.

WEST HARTLEPOOL.

Name of firm.	Tonnage produced.			Capacity of yard.
	1885.	1886.	1887.	
W. Gray & Co	20,386	13,117	30,243	40,000
E. Withy & Co	12,644	2,176	19,899	24,000
R. Irvine & Co	.....	.....	8,000	10,000
Total	33,030	15,293	58,142	.....

THE TEES.

Raylton, Dixon & Co	7,850	7,347	15,068	35,000
M. Pearse & Co	11,711	6,553	8,851	30,000
Richardson, Duck & Co	12,799	5,276	6,920	25,000
Craig, Taylor & Co	1,602	1,300	4,507	2,000
Craggs & Sons	376	.....	.....	15,000
Total	34,338	20,476	35,346	.....

BLYTH.

The Blyth Shipbuilding Company	1,154	.....	2,160	18,000
Union Co-operative Shipbuilding Company	61	48	.....	100
Total	1,215	48	2,160	.....

WHITBY.

Turnbull & Son	.....	1,930	4,784	15,000
Whitby & Robin Hood's Bay Shipbuilding Company	.....	91	.....	.....
Total	.....	2,021	4,784	.....

SUMMARY.

District.	Tonnage produced.		
	1885.	1886.	1887.
The Tyne	102,998	83,317	104,284
The Wear	61,771	61,399	55,214
West Hartlepool	33,030	15,293	53,132
The Tees	34,338	20,476	35,346
Whitby	.....	2,021	4,784
Blyth	1,215	48	2,160
Totals	233,352	182,554	284,920

British ship-building on the Clyde.

Name of firm.	Tonnage produced.			Capacity of yard.
	1885.	1886.	1887.	
Russell & Co	40,866	29,843	27,035	50,000
A. Stephen & Sons	11,549	3,525	22,915	30,000
D. and W. Henderson & Co	3,177	2,155	14,416	20,000
Caird & Co	9,329	6,285	12,525	20,000
W. Denny & Bros	16,423	12,924	10,369	50,000
Napier & Sons	5,061	6,545	9,850	30,000
Lobnitz & Co	3,404	881	9,600	15,000
Fairfield & Co	9,026	28,434	13,228	50,000
J. and G. Thomson	5,417	8,810	8,200	40,000
C. Connell & Co	6,542	4,764	7,840	25,000
R. Duncan & Co	10,626	4,752	7,663	20,000
A. McMillan & Son	13,228	7,892	6,300	40,000
J. Reid & Co	2,520	511	4,920	8,000
A. and J. Inglis	3,818	4,221	4,615	25,000
Barclay, Carle & Co	8,614	12,520	4,470	20,000
London & Glasgow Shipbuilding Company	5,999	7,195	3,450	25,000
Aitken & Mansel	2,004	.....	2,770	20,000
Scott & Co., Greenock	9,156	13,198	2,000	30,000
Blackwood & Gordon	1,060	1,859	2,000	10,000
Alley & Maclellan	.....	.....	1,945	.....
Birrell, Stenhouse & Co	2,834	1,702	1,734	3,000
Napier, Shanks & Bell	1,637	4,247	1,680	12,000
W. Simons & Co	5,088	1,298	1,550	7,000
D. J. Dunlap & Co	750	350	724	8,000
Murray Bros	75	640	620	1,200
J. McArthur & Co	207	650	580	3,000
J. Fullerton & Co	934	296	560	.....
S. McKnight & Co	956	561	399	3,500
Abercorn Shipbuilding Company	.....	.....	376	1,000
W. S. Cumming	194	178	361	300
Fleming & Ferguson	1,086	1,200	250	8,500
Mechan & Sons	.....	.....	245	.....
Fyfe & Son	90	44	195	200
D. MacGill & Co	.....	.....	187	.....
Scott & Co., Bowling	1,290	1,541	168	2,000
Ailsa & Co	.....	.....	122	.....
J. B. Seath & Co	172	146	120	3,000
D. White & Co	.....	.....	100	.....
J. and J. Hay	.....	.....	80	.....
Ross & Duncan	110	51	40	250
Murdoch & Murray	1,384	466	20	12,000
J. Thomson	.....	.....	15	.....
W. B. Thompson	5,267	4,913	.....	10,000
Hamilton & Co	1,220	2,126	.....	10,000
Campbeltown Shipbuilding Company	400	252	.....	2,500
Calzean Shipbuilding Company	611	228	.....	1,000
W. Burrell & Son	.....	215	.....	12,000
Kincaid & Co	.....	170	.....	.....
Ardrossan Shipbuilding Company	28	149	.....	250
T. Orr, jr	.....	87	.....	.....
W. Swan & Co	120	60	.....	400
Various	1,264	.....	.....	.....
Total	198,466	172,474	186,237	.....

British ship-building in various districts.

BELFAST.

Name of firm.	Tonnage produced.			Capacity of yard.
	1885.	1886.	1887.	
Harland & Wolff	20,492	20,846	31,446	35,000
Workman, Clarke & Co	6,993	4,752	9,644	10,000
Paul Rodgers	.....	214	189	400
McIlwaine, Lewis & Co	271	450	.....	2,000
Total	27,756	26,262	41,279	.....

British ship-building in various districts—Continued.

DUNDEE.

Name of firm.	Tonnage produced.			Capacity of yard.
	1885.	1886.	1887.	
Gourley Bros. & Co	1,933	2,137	5,531	15,000
W. B. Thompson & Co., limited	3,358	6,006	5,085	23,000
Pearce Bros	692	.....	2,326	16,000
A. Stephen & Sons	1,374	1,375	1,353	5,000
Total	7,357	9,518	14,245	.....

SOUTHAMPTON.

Oswald, Mordaunt & Co	19,192	17,966	10,323	35,000

THE MERSEY.

T. Royden & Sons	11,523	11,023	4,008	15,000
Laird Bros	4,067	2,077	2,662	20,000
R. & J. Evans & Co	3,108	1,690	1,810	6,000
W. H. Parker & Sons	7,678	4,691	1,359	17,000
Cochran & Co	1,220	821	448	7,000
Harland & Co	.....	120	.....	.....
Total	27,596	20,422	10,282	.....

THE HUMBER.

Hull.				
Earle's Ship-building Co	6,191	11,367	9,578	20,000
Hunt & Fowler	.....	87	.....	.....
Totals	6,191	11,454	9,578	.....
Beverley.				
W. Caisley	.....	90	185	.....
Cochrane, Cooper & Schofield	.....	930	.....	.....
Total	.....	1,020	185	.....
Goole.				
Cottingham Bros	.....	371	.....	.....
Grimsby.				
T. C. Charlton	.....	105	.....	.....

WORKINGTON.

R. Williamson & Son	1,860	3,746	4,124	.....

LEITH.

Ramage & Ferguson	7,259	5,340	3,892	20,000
J. McKenzie & Co	282	98	106	500
Marr Bros	152	.....	.....	500
Hawthorn & Co	310	.....	.....	4,000
S. & H. Morton & Co	624	.....	.....	4,000
Total	8,627	5,438	3,998	.....

ABERDEEN.

Hall, Russell & Co	3,781	1,540	1,765	10,000
Alexander, Hall & Co	3,618	.....	.....	10,000
Total	7,399	1,540	1,765	.....

British ship-building in various districts—Continued.

VARIOUS DISTRICTS.

District.	Name of firm.	Tonnage produced.			Capacity of yard.
		1885.	1886.	1887.	
Barrow-in-Furness	Barrow Ship-building Co	4,058	18,228	2,920	25,000
Londonderry	C. J. Bigger			2,290	
Kirkcaldy	John Scott & Co			1,920	
Grangemouth	Grangemouth Dock-yard Co		2,627	1,780	
The Thames	Samuda Bros			781	
Cardiff	Penarth Ship-building Co			392	
Rye	G. & T. Smith		382	322	
Chepstow	Finch & Co	398		272	
Cowes	W. White & Sons			231	
Falmouth	Cox & Co		91	221	
Ipswich	W. Bayley & Sons		84	85	
Yarmouth	H. Fellows & Sons		162	82	
Bristol	Newall & Co			20	
Maryport	Ritson & Co	1,548	3,200		2,000
Whitehaven	Whitehaven Ship-building Co		2,304		18,000
Peterhead	Carnegie & Matthew		45		
Newport, Monmouth	Mordey, Carney & Co	90			1,000
Total		6,094	27,123	11,266	

GENERAL ABSTRACT.

Ports.	1885.	1886.	1887.
	Tons.	*Tons.*	*Tons.*
The Clyde	498,458	172,474	186,287
The Tyne	102,998	88,317	104,284
The Wear	61,760	61,399	85,214
West Hartlepool	38,080	15,293	58,152
Belfast	27,756	26,262	41,279
The Tees	34,338	20,476	35,346
Dundee	7,357	9,518	14,245
Southampton	19,192	17,966	10,328
The Mersey	27,596	20,490	10,292
The Humber	6,191	12,950	9,768
Whitby		2,021	4,784
Leith	8,627	5,488	3,998
Barrow-in-Furness	4,058	18,228	2,920
Londonderry			2,290
Blyth	1,215	48	2,160
Kirkcaldy			1,920
Aberdeen	7,399	1,540	1,765
Grangemouth	1,500	2,627	1,780
The Thames			781
Cardiff			392
Rye		382	322
Chepstow	398		272
Cowes			231
Falmouth		91	221
Ipswich		84	85
Yarmouth		162	82
Bristol			20
Workington	1,860	3,746	4,124
Whitehaven		2,304	
Maryport	1,548	3,200	
Peterhead		45	
South Wales	90		
Total	540,371	479,991	578,208

Steel vessels built in 1887.

THE CLYDE.

Builders.	Vessels.	Gross registered tonnage.	Builders.	Vessels.	Gross registered tonnage.
A. Stephen & Son	8	18,884	D. J. Dunlop & Co	6	724
D. & W. Henderson & Co	6	14,399	Murray Bros	3	620
The Fairfield Co	6	13,228	McArthur & Co	2	580
Caird & Co	2	12,525	Fleming & Ferguson	1	260
Wm. Denny & Bros	6	10,369	Mechan & Sons	47	245
R. Napier & Sons	3	9,850	Lobnitz & Co	5	200
Russell & Co	6	3,583	D. McGill & Co	2	187
J. & G. Thompson	3	8,200	Scott & Co., Bowling	2	168
C. Connell & Co	4	7,840	W. S. Cumming	5	160
R. Duncan & Co	4	7,663	T. B. Seath & Co	1	120
A. McMillan & Sons	4	5,980	J. Fullerton & Co	4*	60
A. & J. Inglis	4	4,615	Ailsa Company	2	42
London and Glasgow Co	1	3,450	Ross & Duncan	1	40
Aitken & Mansell	1	2,770	Abercorn Ship-building Co	1	28
Barclay Curle & Co	1	2,058	Murdoch & Murray	1	20
Napier, Shanks & Bell	4	1,080	Total	148	136,588

* Barges.

Steel vessels built in 1887—*northeast coast.*

THE TYNE.

Builders.	Vessels.	Gross registered tonnage.	Builders.	Vessels.	Gross registered tonnage.
Sir W. G. Armstrong, Mitchell & Co	13	24,546	W. Dobson & Co	3	2,660
The Palmers' Ship-building Co	8	17,950	Wood, Skinner & Co	3	2,209
Swan & Hunter	8	14,614	Schlesinger, Davis & Co	1	1,983
Redhead & Co	6	13,614	J. T. Eltringham	1	118
Hawthorn, Leslie & Co	6	9,464	Tyne General Ferry Co	1	77
Wigham, Richardson & Co	3	5,842	Total	55	98,021
Tyne Iron Ship-building Co	2	4,944			

THE WEAR.

J. L. Thompson & Sons	11	21,823	J. Blumer & Co	1	1,479
James Laing	7	17,709	Sunderland Ship-building Co	1	54
W. Doxford & Sons	6	13,168	S. P. Austin & Son	1	.....
Short Bros	4	9,107			
Boolds, Sharer & Co	1	3,300	Total	33	69,379
Bartram, Haswell & Co	1	2,744			

WHITBY.

Turnbull & Son	1	2,376	.....	.....	.....

WEST HARTLEPOOL.

Wm. Gray & Co	12	30,243	R. Irvine & Co	1	3,500
Edward Withy & Co	8	18,086	Total	21	51,829

THE TEES.

Raylton, Dixon & Co	7	13,360	Richardson, Duck & Co	2	4,123
Mark Pearse & Co	3	8,851			
Craig, Taylor & Co	3	4,259	Total	15	30,593

Steel vessels built in 1887, *in various districts.*

BELFAST.

Builders.	Vessels.	Gross registered tonnage.	Builders.	Vessels.	Gross registered tonnage.
Harland & Wolff	8	31,446	P. Rodgers	1	189
Workman, Clarke & Co	5	8,476	Total	14	40,111

DUNDEE.

Gourley Bros.	4	5,581	A. Stephen & Son	1	1,363
W. B. Thompson & Co	7	5,085	Total	12	11,929

THE HUMBER.

Earle's Ship-building Co., Hull	3	7,680			

THE MERSEY.

Laird Bros.	9	2,662	T. Royden & Sons	4	55
W. H. Potter & Son	3	796	Total	16	3,513

VARIOUS DISTRICTS.

District.	Builders.	Vessels.	Gross registered tonnage.
Barrow-in-Furness	Barrow Ship-building Co	4	2,920
Leith	Ramage & Ferguson	3	2,730
Aberdeen	Hall, Russell & Co	2	1,750
Grangemouth	Grangemouth Dock-yard Co	7	1,730
Londonderry	C. J. Bigger	4	1,710
Southampton	Oswald, Mordaunt & Co	1	1,609
The Thames	Samuda Bros.	5	781
Do.	Yarrow & Co.	38	
Falmouth	Cox & Co.	3	231
Cowes	W. White & Sons	2	207
Chepstow	E. Finch & Co.	2	94
Cardiff	Penarth Ship-building Co	1	51
Bristol	Newall & Co	1	20
Total		73	13,823

SUMMARY.

Ports.	Vessels.	Gross registered tonnage.	Ports.	Vessels.	Gross registered tonnage.
The Clyde	148	136,538	Aberdeen	2	1,750
The Tyne	55	98,021	Grangemouth	7	1,730
The Wear	33	69,379	Londonderry	4	1,710
West Hartlepool	21	51,829	Southampton	1	1,609
The Tees	15	30,593	The Thames	43	781
Belfast	14	40,111	Falmouth	3	231
Dundee	12	11,929	Cowes	2	207
The Humber	3	7,680	Chepstow	2	94
The Mersey	16	3,513	Cardiff	1	51
Barrow-in-Furness	4	2,920	Bristol	1	20
Leith	3	2,730			
Whitby	1	2,376	Total	391	465,792

Vessels built in the United Kingdom for foreign and colonial account, 1887.

THE TYNE.

Builders.	Vessels.	Gross registered tonnage.	Builders.	Vessels.	Gross registered tonnage.
Sir W. G. Armstrong, Mitchell & Co	12	18,542	Wigham, Richardson & Co	2	2,210
Hawthorn, Leslie & Co	7	10,573	Wood, Skinner & Co	2	2,068
Swan & Hunter	4	7,686	W. Dobson & Co	2	1,999
J. Redhead & Co	1	2,748	T. & W. Smith	1	226
Palmers' Ship-building Co	7	2,377	Total	38	48,424

THE WEAR.

J. L. Thompson & Sons	4	8,078	J. Blumer & Co	1	1,479
James Laing	2	3,486	Osbourne, Graham & Co	1	1,150
Boolds, Sharer & Co	1	3,300	W. Doxford & Sons	1	1,084
S. P. Austin & Son	1	1,668			
Sunderland Ship-building Co	2	1,610	Total	13	21,795

THE TEES.

Raylton, Dixon & Co	3	3,055	Craig, Taylor & Co	1	1,343
M. Pearse & Co	1	2,847			
Richardson, Duck & Co	1	1,913	Total	6	9,158

THE MERSEY.

Laird Bros	8	1,760	W. H. Potter & Son	2	297
			Total	10	2,057

THE CLYDE.

Lobnitz & Co	26	8,400	D. J. Dunlop & Co	4	582
The Fairfield Co	2	7,338	J. Walker & Co	2	580
Denny & Bros	2	6,540	Abercorn Ship-building Co	4	348
Russell & Co	3	5,365	Barclay, Curle & Co	1	205
J & G. Thomson	1	5,000	D. MacGill & Co	2	187
A. McMillan & Sons	2	1,800	Scott & Co., Bowling	1	128
A. & J. Inglis	1	1,720	Murray Bros	2	120
Napier, Shanks & Bell	4	1,680	W. S. Cumming	3	61
C. Connell & Co	1	1,663	Ross & Duncan	1	40
Alley & Maclellan	14	1,583			
Stephen & Son	1	1,246	Total	78	45,586
W. Simons & Co	1	1,000			

VARIOUS DISTRICTS.

District.	Builders.	Vessels.	Gross registered tonnage.
Leith	Ramage & Ferguson	2	2,880
Barrow-in-Furness	Barrow Ship-building Co	1	1,760
Grangemouth	Grangemouth Dock-yard Co	7	1,730
Southampton	Oswald, Mordaunt & Co	1	1,609
Dundee	W. B. Thompson	2	880
Falmouth	Cox & Co	1	101
Chepstow	E. Finch & Co	2	94
Bristol	Newall & Co	1	20
The Thames	Yarrow & Co	12	.....
Total		29	9,024

Vessels built in the United Kingdom, etc.—Continued.

SUMMARY.

Ports.	Vessels.	Gross registered tonnage.	Ports.	Vessels.	Gross registered tonnage.
The Tyne	38	48,424	Dundee	2	880
The Clyde	78	45,586	Falmouth	1	101
The Wear	18	21,795	Chepstow	2	94
The Tees	6	9,158	Bristol	1	20
Leith	2	2,880	The Thames	12	.....
The Mersey	10	2,057	Newport	.....	.....
Barrow-in-Furness	1	1,760			
Grangemouth	7	1,730	Total	174	186,044
Southampton	1	1,609			

SEAMEN'S WAGES.

REPORT OF CONSUL RUSSELL.

With a view to ascertaining the relative monthly rate of wages paid to officers and seamen of vessels of the United States with that of other nationalities, together with the cost of maintenance per man on board their respective vessels, I have compiled the following tables: (1) showing the wages paid, and (2) the cost of maintenance, together with the rates per cent. less than those of the United States.

Reference to these tables will show that the vessels of the United States pay the highest rate of wages, besides costing more for maintenance of the crews than those of any other nation. This, of course, refers to voyages commencing in the United States; but even where they commence in foreign ports—that is, ship their crews and obtain their supplies at a foreign port—they then average higher rates than vessels of other nationalities as regards cost of maintenance.

No comment is necessary in respect of the wages question, as the general labor market of the United States fixes that for shipments in home ports.

British vessels in domestic ports can procure crews for from 37 to 32 per cent. lower than those paid on American vessels, which is a serious item in the disbursement account. Then, again, the cost of maintenance on American ships is about 40 cents per day per man against the English 29 cents, or a difference of 27 per cent. in favor of the latter. When it is considered that provisions, such as beef, pork, and flour, which are the principal articles of food consumed, can be obtained in the United States, if any thing, at a lower price than in England, it seems remarkable that the crews of our vessels should cost 27 per cent. more per man for maintenance; yet such appears to be the case. It is an acknowledged fact, that the living on board our vessels is superior to that of other nations, and it is generally asserted that larger quantities of food are supplied to the crew, the scale of provision laid down by Congress being rarely, if ever, resorted to.

The wages paid on vessels belonging to Norway and Sweden, Russia, Germany, Denmark, Austria, and Spain, average about 47 to 50 per cent. lower than those of United States vessels, and the cost of maintenance about 32 per cent. less, excepting those of Germany, which cost about 10 per cent. less only.

CHAS. T. RUSSELL,
Consul.

UNITED STATES CONSULATE,
Liverpool, November 18, 1887.

TABLE No. 1.—*Statement showing the rates of monthly wages paid to officers and seamen on vessels at the home ports of the various nation a lities.*

Nationality.	Mate.		Second mate.		Seamen.		Carpenter.	
	Pay.	Less than U. S.	Pay.	Less than U. S.	Pay.	Less than U. S.	Pay.	Less than U. S.
		P.ct.		*P.ct.*		*P.ct.*		*P.ct.*
Norway and Sweden	$17.02 to $19.46	63	.....	.....	$9.73 to $10.94	45	$13.16 to $14.59	61
Russia	17.51 to 19.46	63	$11.67 to $15.56	58	9.73 to 11.67	43	9.73 to 11.67	67
Germany	17.85 to 20.25	62	13.09 to 15.47	56	9.54 to 10.71	45	.....	.....
Denmark	17.99	64	.....	.....	10.94	43	.....	.....
Austria	.....	.....	.....	.....	10.70 to 11.19	43	.....	.....
Spain	43.75	12	34.06	.....	13.62	27	.....	.....
Great Britain:								
Sailing-vessels	38.92	22	21.89	37	12.16 to 13.38	29–33	27.98 to 34.06	17
Steam-ships, Atlantic voyages	55.91 to 66.08	.....	46.18 to 58.34	.....	19.46	.....	.....	.....
Other voyages, steam-ships	38.93	.....	29.19	.....	14.59	.....	29.19	.....
United States:								
Pacific coast	50.00	.....	35.00	.....	20.00	.....	35.00 to 40.00	.....
Atlantic coast	50.00	.....	30.00 to 35.00	.....	18.00	.....	30.00 to 35.00	.....

Nationality.	Cook.		Steward.		Ordinary seamen.	
	Pay.	Less than U. S.	Pay.	Less than U. S.	Pay.	Less than U. S.
		P. ct.		*P. ct.*		*P. ct.*
Norway and Sweden	$10.94	66	$10.94 to $12.16	69	$7.29	46
Russia	9.73 to $11.67	67	.....	.....	7.29 to $7.28	
Germany	.....	.....	.....	.....	5.95 to 7.14	5
Denmark	.....	.....	.....	.....	8.51	37
Austria	.....	.....	.....	.....	9.73	27
Spain	17.51	28	19.46	49	11.19	17
Great Britain:						
Sailing-vessels	19.46	40	24.33 to 26.76	36	7.29 to 9.73	37
Steam-ships, Atlantic voyages	.....	.....	14.59 to 17.02	.....	.....	.....
Other voyages, steam-ships	.....	.....	.....	.....	.....	.....
United States:						
Pacific coast	35.00	.....	40.00	.....	15.00	.....
Atlantic coast	30.00	.....	35.00	.....	12.00	.....

TABLE No. 2—*Statement showing the cost of maintenance, per man per day, on board vessels of various nationalities.*

Nation.	Cost of maintenance.	Less than the United States.
	Cents.	*Per cent.*
Norway and Sweden	22 to 24	42
Russia	28	30
Germany	36	10
Denmark	23 to 27	37
Austria	24 to 36	40
Spain	30	40
Great Britain	22 to 36	27
United States of America	40	.....

DISEASES OF THE VINE IN FRANCE.

REPORT OF CONSUL ROOSEVELT.

PHYLLOXERA.

The origin of this most widely spread and deadly of all diseases of the vine is a most disputed question among writers and scientists. That it has existed from time immemorial is undeniably established by ancient writers. Strabo speaks of an insect somewhat resembling the phylloxera of to-day, but which was in all probability only the white cochineal which is still very common in Greece.

The phylloxera is a very small insect belonging to the order of hemiptera, and never attains more than a millimeter in length. They are distinguished by two varieties, winged and wingless, which are hatched from eggs. The question of reproduction is an undecided one, as many concurring and adverse opinions exist on the subject.

The wingless insect is found on the soil, has the body, when fully matured, covered with small projections. The winged species subsists on the leaves, and unlike its kinsman of the soil, its body is smooth. Both lay eggs, which hatch in from eight to ten days, according to more or less favorable circumstances. The winged animal is immediately apterous; a thin covering or envelope is shed and the wings appear. Both insects possess a strong sucker, protected by a sheath, situated in front of the thorax or breast, and with this terrible instrument they attack the radicle of the vine, thereby destroying it. The mere act of sucking the juice of the vine is not the determining cause of eventual destruction. The fatal work is accomplished by destroying the structure of the vine, or by poisoning it. The insect attaches itself to the root by the aid of its sucker, which produces a nodule slightly concave on the side of the insect and swollen on the opposite side. A few of these nodules are sufficient to prevent the radicles from performing the vital functions for which they are destined, and in consequence the vine succumbs. It is a generally accepted fact that the phylloxera which lives on the surface of the ground is sightless. It is eminently probable that this insect, like a great many others, is attracted by the odors diffused by the vine, and that the olfactory organ is developed in an extraordinary degree. Invariably when vines have been destroyed by this pernicious curse they have been found in numbers upon the dead roots. Several instances have been brought under my notice where vines, apparently dead from this plague, have been cleaned, transplanted in fresh soil, and subsequently bore fruit. It is generally believed here that phylloxera is of American origin, that it was imported into France on cuttings coming from the United States.

In looking over an interesting work on phylloxera, published by Mr. Lalliman, of Bordeaux, a most intelligent viticulturist, indefatigable in his fight against all enemies of the vine, I was gratified to read the following caustic lines on the oft-repeated assertion that France was indebted to the United States for this persevering and invincible plague:

The phylloxera may have always existed in our country, but unperceived and inoffensive until the day when it suddenly multiplied under the influence of new

circumstances. The insect may have come from some unknown region. Investigation in vineyards where it first appeared failed to find an American vine affected with the disease, despite the fact that many savants attributed its origin to that country. After careful investigation Mr. Planchon could not establish this fact, and its origin was supposed spontaneous. As no fixed opinion of its origin has been deduced, Mr. Miret declares that it must either be spontaneous or American.

The author further quotes from a letter received by him from the illustrious and popular Italian, Chevalier Rovasendo, as follows:

The origin of phylloxera is a question which dominates and is entirely superior to human intelligence. Where does it come from, as it is not in Italy, and that country is covered with American vines? I have always considered the accusation that it came from America very unjust, especially as it would very much embarrass one to prove it.

Mr. Lalliman strongly urges the reconstruction of the French vineyards by American vines, and pertinently remarks that they may "one day be the goose to lay the golden egg of renewed viticultural prosperity in France."

OIDIUM.

The disasters which this disease has caused since its appearance have occasioned great disturbance in the economic situation in the south of France. Numerous researches have disclosed nearly every particular in the history of this parasite, a few terms only of its evolution remaining obscure.

The oidium was first discovered in England, 1845, in the vineyards at Margate. Several writers of that period make mention of the disease, and the botanist, J. Berkeley, calls it *Oidium Tuckeri*, from the first discoverer, Tucker, and describes it as "a particular mold of most pernicious character." The first known of it in France was in 1847, in the vineyards of J. de Rothschild at Suresnes. The following year it was observed in the vineyards in the environs of Paris, and in 1850 the vines in that locality were ravaged by it. The existence of the evil became general in 1851 and very disastrous in the neighborhood of Paris and Piedmont. From 1851 to 1853 its ravages caused the greatest panic, and authorities of that time speak of the yield in different vineyards falling off from one-tenth to one-twentieth. In vineyards where the vines remained healthy the wine produced brought fabulous prices. This evil is not so dreaded and has not occasioned such ruin as the phylloxera, as the disease can be controlled in its evil influence by assiduous and intelligent care. It is perennial, and rapidly spreads under favorable conditions.

The oidium attacks the vines at the earliest evidence of budding to maturity of vegetation. In consequence of the lignifying of the roots and the disappearance of the chlorophyl, the development of the disease is slow but progressive, although other conditions may exist. It holds firm to the leaves, causing, however, only insignificant damage. It has been observed in many instances that young roots, and also branches which trail upon the ground, whose fruit and leaves are easy prey, never show a trace of oidium. Heat is the predominating condition to the development of the disease. Moisture, though influential, is less necessary. Thus, in dry vineyards, easily heated, with shallow, sandy, and stony soil, where the vines bud early, owing to high temperature, the disease is more destructive than in fresh, cool lowlands. It has been observed that in vineyards lying on the borders of rivers and sea-coast, under the influence of

fogs and fine rains, the evil is only aggravated when the temperature is very high. Hard rains, which wash the vines, prevent the spread of the disease, and when the vines are carefully cultivated its ravages are in a measure controlled.

MILDEW.

Notwithstanding careful search, I fail to find, either in ancient or modern works, mention or citation of a disease having anything analogous to the plague now known as mildew. In 1878 leaves from the Jacques, presenting an unusual appearance, were sent from different parts of France to Monsieur Planchon for analysis. He pronounced the malady mildew, and said it had been introduced into France by the importation of American vines. In 1879, as shown by reports, it had spread with great rapidity, appearing in the vineyards of nearly every department in France. One writer, to refute the theory of its American origin, cites that a disease identical in every respect to the mildew has long been known to the viticulturists near Lyons, France, under the name of *melin*. Other authentic authority states that it was not imported into France, as it existed near Bordeaux previous to 1878, and was known as *brouillardage*, or white disease.

BLACK-ROT.

In a previous report on this destructive disease I mentioned that it was first observed in France in 1885, in the department of the Herault. It has continued to extend its dominion and create widespread apprehension among viticulturists. It is persistent and deadly in its attacks, and as much dreaded as that most vindictive of vine enemies, the phylloxera. From latest reports I can only confirm my earlier statement that this is evidently the most stubborn and formidable disease of the many now devastating the vineyards.

ANTHRACNOSE.

If attention has been more especially attracted to this disease in the past few years, it is not because it is a modern pest—on the contrary, it is so old that its origin is lost in antiquity—but because its ravages at certain times have been grave. It is indisputable that it is indigenous and not imported. The destruction by this parasite was as serious in 1839 and 1848 as in 1874–1878. No reason is given for the increase in its baneful influence in the earlier period, but in the latter the aggravation of the disease is attributed to a recent imputation of new reproducing organs of the mushroom. In consequence of its extreme age, and in spite of its relatively slow development, the anthracnose has spread nearly everywhere. It exists in all the vineyards of France, but is less frequently seen and less hurtful in general in Champagne, Burgundy, and the vineyards of the north, than in Languedoc, Rousillon, and especially in the Gironde.

MÉLANOSE.

The origin of the mélanose, like that of most of the preceding diseases, is dignified by being attributed to America. It originates from a mushroom; is almost powerless in its attacks on vines grafted on American stock. This is either a mute protest against an unjust

imputation, or else it discloses an ungrateful phase in the fungus of our free land, until one wonders if transplanting to the historic soil of France can arouse a feeling of antagonism, even in a mushroom, so that it will refuse to exist upon its natural element, and attaching itself to French vines, repudiate its mother country.

POURRIDIE.

Pourridie is the result of several living mushrooms, which in certain cases are parasites on the roots of both wild and cultivated vines. Its origin, like that of anthracnose, is unknown, owing to its great age. Since attention has been attracted to the alteration of the roots produced by the ravages of phylloxera this plague has been defined as a special disease.

Anterior to the discovery of phylloxera cases were known of vines dying from rotting of the roots, upon which were found mycélium filaments; but it was not until 1874 that particular attention was given to this disease. It was then designated as a mushroom or parasite living upon and effectually destroying the vine.

ERINNOSE.

At the commencement of vegetation of the vine, mildew is very frequently confounded with erinnose or erineum, which is nothing more than the gall of the acarien parasite. The effect, however, upon the leaves is easily distinguishable. Leaves attacked by mildew present a smooth surface, while a crinkled uneven surface proclaims erinnose. The gall is the immediate effect of the sting of the acarien, and is almost invariably found on the under side of the leaf. The galls average about a quarter of an inch in diameter, are usually isolated, but occasionally unite and spread over a large surface, destroying the appearance of the leaf. They are covered by a soft down or fuzz, which in its early state is a brilliantly white, and it is this which is often mistaken for the white efflorescence of the mildew, especially as the leaf does not present a bleb. The fuzz of the erinnose has not the milk-white tint of the mildew, adheres to the leaf, and can not be rubbed off, while, on the contrary, the bearing filaments of the mildew are easily detached, scattering a fine powdery dust at the slightest shock.

As the galls of the erinnose become old they change in color to a deep russet tint gradually growing darker and darker. At this period it is impossible to confound it with mildew. The fuzz of the gall is formed from the downy substance of the skin of the leaf developed in an abnormal manner, resulting from the sting of the phytocoptes vitis, which lives in a larva state in the gall until the spring, when it arrives at a state of perfection, and soon thereafter dies.

The erinnose causes a certain perturbation during the commencement of vegetation, as it attacks the young leaves; otherwise it is not particularly hurtful to the vine. Its action on the matured leaves is of slight importance. Constant powdering of the vines with sulphur, especially after digging, when the roots are still young and short, without entirely dissipating the evil, checks its ravages. Many viticulturists urge that the lime-wash used against the pyral in winter causes the disappearance of the erinnose by destroying the acarien lodged under the bark, and particularly at the base of the bud.

THE AMERICAN VINE.

Although I have enumerated the most important of the plagues existing in the vineyards of France, I have omitted mention of many less mischievous evils. The intelligent, practical, unbiased viticulturist unhesitatingly admits the most efficacious method of reconstructing the vineyards is by American vines.

Shortly after the present vintage I was particularly impressed by the result of practical demonstration of this theory in vineyards in the environs of La Réole, near Bordeaux. In several where the vines are more than five years old the experiment has been complete, the success conclusive. The vines have been most happily selected and adapted. The yield from the malbec and merlot gave an increase amounting to nearly fifty hogsheads. The yield from the vineyards on the domain of Bellevue, "Chateau Bellevue" (also renewed by American vines), the most famous wine of Blaye, France, sold in 1886 for 1,000 francs ($193) per hogshead. In 1887 it brought the same price, but on foot. These wines are excellent, of the first quality, and may advantageously be compared with the most famous growths of the Médoc.

Without mentioning numerous properties which have been nearly entirely replanted in American vines, and which produced splendid yields, I will only say that everywhere where the species have been well chosen, the adaptation studied and understood, the ground carefully fertilized, success has been incontestable. It is an almost assured fact that in the near future the barriers of prejudice will be entirely demolished by visual proof, and France in time will see her once famous industry restored to its pristine glory through the medium of American vines.

GEO. W. ROOSEVELT,
Consul.

UNITED STATES CONSULATE,
Bordeaux, France, November 22, 1887.

WHEAT IN FRANCE.

*REPORT OF CONSUL-GENERAL RATHBONE.**

In France the average annual production of wheat amounts to about 110,000,000 hectoliters, or 82,500,000 quintals. This is double the quantity produced about fifty years ago. The increased production is due both to the extended area now sown with wheat and also to the augmentation of the average yield.

The quantity of seed sown to each hectare has always been about 2 hectoliters, and it may be said, generally speaking, that two grains of seed produce now as much as three produced fifty years ago. The weight of the hectoliter of wheat has also increased. It varies according to the years from 73 to 78 kilograms.

To simplify calculations, 75 kilograms, or three-quarters of a quintal, are generally counted as a hectoliter. The 110,000,000 hec-

* The statistics contained in this report, showing the production, consumption, importation, and exportation of "wheat in France," have been compiled principally from a recently published work of Mr. Alfred de Foville, chief of the bureau of statistics of the French ministry of finance.

toliters, which constitute the average annual production, represent, therefore, from 80,000,000 to 85,000,000 quintals (312,180,000 bushels).

PRICE OF WHEAT IN FRANCE.

The following table shows the average prices of a hectoliter (2,838 bushels) of wheat in periods of five years from 1811 to 1886:

Periods.	Average price.	Periods.	Average price.
	Francs.		*Francs.*
1811 to 1815	24.05	1851 to 1855	22.92
1816 to 1820	25.33	1856 to 1860	21.76
1821 to 1825	16.45	1861 to 1865	20.31
1826 to 1830	20.25	1866 to 1870	23.19
1831 to 1835	18.21	1871 to 1875	25.37
1836 to 1840	19.86	1876 to 1880	22.36
1841 to 1845	19.61	1881 to 1885	20.99
1846 to 1850	19.87	1886	16.10

CONSUMPTION AND COMMERCE.

The consumption of wheat in France has increased much more rapidly than the population, because the bread made of wheat is taking the place of the bread made of rye, barley, oats, and buckwheat that formerly served as a principal article of food in many parts of France. Mr. Blaise, a French economist, has made the following calculations relative to the comparative consumption of wheat in France from 1821 to 1830 and from 1870 to 1880:

Description.	1821 to 1830.	1870 to 1880.
Quantity of wheat harvested annually.....Quintals..	44,542,527	74,132,009
Excess of importations over exportations.....do	260,060	7,800,732
Total.....	44,802,587	81,932,741
To deduct for seed .....Quintals..	7,436,828	10,412,714
Remainder for consumption .....do....	37,365,759	71,520,027
Population of France	31,515,000	36,893,000
Average consumption per head:		
Per annum .....kilograms..	118.5	193
Per day.....grams..	324.0	530

Thus in fifty years the ration of bread or of wheat of the French people has increased by 63 per cent.

In taking account of the inferior kinds of grains other than wheat utilized in making bread, Mr. Blaise finds per head and per day 377 grams in 1821 to 1830 and 563 in 1870 to 1880, making an augmentation of 49 per cent. in quantity, coinciding with a notable amelioration in quality.

In a report presented before the budget commission for the year 1887 the annual consumption of wheat in France, including wheat used for seed and for industrial purposes, is given at 110,000,000 hectoliters (83,000,000 quintals) for 1874 to 1879 and 124,000,000 hectoliters (93,000,000 quintals) for 1883 to 1885.

The low price of wheat for some years past has certainly increased consumption. The national production does not suffice for the needs of the country, and this has nearly always been the case. The state-

ments below show the importations and exportations of wheat during the thirty years from 1856 to 1885 (special commerce):

[Quantity given in quintals.]

Years.	Imported.	Exported.	Years.	Imported.	Exported.
1856	5,400,000	.....	1871	9,500,000	.....
1857	2,900,000	100,000	1872	4,000,000	2,300,000
1858	1,900,000	3,000,000	1873	5,000,000	1,000,000
1859	900,000	3,200,000	1874	7,900,000	700,000
1860	1,000,000	1,900,000	1875	3,500,000	1,900,000
1861	9,300,000	400,000	1876	5,300,000	700,000
1862	4,100,000	200,000	1877	3,400,000	1,500,000
1863	1,400,000	500,000	1878	13,900,000	100,000
1864	600,000	800,000	1879	22,200,000	100,000
1865	200,000	2,200,000	1880	20,000,000	100,000
1866	600,000	2,400,000	1881	12,900,000	100,000
1867	5,100,000	200,000	1882	12,900,000	100,000
1868	7,800,000	400,000	1883	10,100,000	100,000
1869	1,300,000	500,000	1884	10,500,000	.....
1870	3,900,000	200,000	1885	6,500,000	100,000

Importation of wheat for consumption in France during the years 1885 *and* 1886 (*special commerce*).

Countries whence imported.	1885.	1886.
	Quintals.	*Quintals.*
Algeria	958,463	1,182,947
Australia	393,269	34,228
Belgium	130,633	96,809
Brazil	12,458	.....
British India	787,160	980,967
Chili	.....	28,118
Germany	30,249	24,690
Morocco	21,841	.....
Roumania	128,989	151,595
Russia	1,893,383	1,736,600
Turkey	611,378	352,044
United States	1,490,211	2,508,769
Other countries	24,827	20,709
Total	6,457,861	7,097,486
Value	$23,867,981	$29,601,716
Duties collected	1,644,334	3,494,809

It appears from the above exhibit that in 1886 the United States ranked first among the countries from which wheat is imported into France.

J. L. RATHBONE,
Consul-General.

UNITED STATES CONSULATE GENERAL,
Paris, France, December 22, 1887.

SOUTH AMERICAN FRESH MEATS IN FRANCE.

REPORT BY CONSUL MASON.

In a recent report from this consulate the fact was stated that during October of last year two new monthly lines of steamers had been established between the port of Marseilles and Buenos Ayres. These, added to the three regular lines already existing, gave during the month of November seven departures of steamers for the Argen-

tine Republic. How well this increased service is justified by the commerce of France with the rapidly growing valley La Plata is attested by the fact that to-day no less than three large steam-ships are clearing from this port for Montevideo and Buenos Ayres. The smallest of these carries 1,150 emigrants (mostly Italians), and all have full cargoes of freight largely made up of manufactured goods of French origin.

But it is not merely through her export trade that France has secured important and valuable relations with the Argentine Republic. During the past six months a reciprocal enterprise has been established for the importation of dressed meats from that country, and fresh beef, mutton, veal, and game are now brought from Barracas in regular cargoes and sold to the butchers of Havre, Rouen, Paris, and other principal cities of France.

In view of the extraordinary capacity of the United States for meat production and our already important traffic in dressed meats with Great Britain, it may be of interest to define precisely the local conditions under which this new enterprise has been established, and which would apply equally to similar imports from the United States.

The Company "Saminena," which has slaughter-houses and a refrigerating establishment at Barracas, near Buenos Ayres, constructed last year two steamers, the *Belgrano* and *San Martin*, especially adapted for that service. These steamers, which are rigged with movable compartments or chambers to receive the meat, ply regularly between Barracas and Havre. When the meat is discharged at the latter port the partitions which form the compartments can be taken down and stowed, thus making room for ordinary freight outward bound, and overcoming the hitherto fatal financial difficulty involved when refrigerator steamers have been obliged to make the return voyage in ballast.

PREPARING AND SHIPPING MEATS.

The process of preparing the meats for shipment includes nothing new or mysterious. Whole carcasses of mutton and veal and half carcasses of beef are hung in dry-air chambers chilled to 25° or 30° centigrade below the freezing point until the inmost parts of each piece are frozen solid and the germs of putrefaction, if any exist, are completely chilled. Once frozen to this solid condition in the packing-house, it is only necessary to keep the meat during transportation in a temperature sufficiently cold to prevent thawing. For this purpose 8° or 10° centigrade below zero is found to be quite sufficient. The compartments on shipboard are made of double walls of wooden planking, with a layer of pulverized charcoal between, and are kept cold by a refrigerating machine operated by an engine of fifty-horse power attached to the boilers of the steamer. At Havre, Paris, and Rouen, where depots have been established, tight chambers are provided similar in construction to those employed on board, except that the former are larger and of course not arranged for dismounting. At all these depots, as well as on shipboard and at the principal slaughter-house in Barracas, refrigeration is produced by compressed-air machines of the Hall pattern, which are manufactured at Dartford, England. In the depot at Paris a gas-motor of fifteen-horse power drives a machine of sufficient capacity to keep four large chambers at the required temperature. For transporting the frozen

meat from Havre to Rouen and Paris box-cars, with double wooden walls, have been found adequate, even in warm weather.

RESULTS.

Thus equipped, the company began operations during the past summer, its first cargo of meat reaching Paris on the 7th of July in perfect condition. As a test of the system of preservation, a carcass of lamb was hung for three days before a meat-stall in Paris during the warmest weather in July, and upon being subsequently cooked was found perfectly sweet.

So far from impairing the firmness of the meat fiber and its power to resist putrefaction, the intense freezing process, as is now claimed, enhances both these qualities.

PRICES.

The meats imported by this company are sold to retail dealers in all French cities where depots have been established at the following prices:

Meats.	Per kilogram.	Per pound.
	Francs.	*Cents.*
Mutton	1.20	10¼
Lamb	1.40	12¼
Beef:		
Hind quarter	1.40	12¼
Fore quarter	1.00	8¼
Veal	1.20	10¼
Saddle of mutton	1.40	12¼
Sheep's tongues	*2.50	*48¼

* Per dozen.

At these prices there is realized by the company a net all-round profit of 9 centimes per kilogram, equal to $15.75 per ton of 2,000 pounds, or between 7 and 8 per cent. of the average value of the merchandise.

These prices are sufficiently below the cost of native meats to attract purchasers, and as the French have few petty prejudices against foreign food products, the frozen meats from La Plata met a ready and extensive sale, one stall at the Halles Centrales at Paris retailing, as early as the 5th of August, an average of 200 carcasses of mutton per day. The whole undertaking has been, in fact, practically successful at every step, and the development which it may reach in France will only be limited by the capital and enterprise of the company.

DUTIES AND OCTROIS.

Let us now examine the general conditions by which this and all similar undertakings are estimated in this country. All dressed meats imported to France from any country not allied by special commercial treaty pay an import duty of 12 francs per 100 kilograms, equal to $21 per ton of 2,000 pounds.

Austria, Italy, and Germany have special commercial treaties with France, which enable dressed meats from those countries to be entered at the French frontier on payment of 3 francs per 100 kilograms, or one quarter the general rate which, in default of such treaty, would apply to meats from the United States and Argentine

Republics, but meats in all those countries are costly and their surplus production is more or less limited.

Besides this there is the octroi or local municipal duty of 11.80 francs per 100 kilograms imposed by Paris and most other French cities upon all meats entered for consumption within their limits. In Marseilles this octroi duty has long been established at 25 francs per 100 kilograms or 2¼ cents per pound for the purpose of favoring the extensive abattoirs maintained by the city, which might otherwise meet serious competition from meats imported from abroad or brought in a dressed condition from the surrounding country.

This excessive octroi duty, more than double that of any other large city in France, would more than consume the profits of importation, and until reduced puts Marseilles out of the list of municipalities which can profit by the use of meats imported from America.

An effort has been made to secure the reduction of present octroi rates to uniformity with those of other large cities, but thus far without success.

The problem which has been solved by the Company Saminena has been that of slaughtering and freezing beef, veal, lamb, and mutton on the Plate River, importing the same by their own steamers via Havre, though an import duty of $21 per ton and a city octroi of $20 per ton is imposed, and selling those meats in perfect condition at prices which, although less than the values of native meats, yield a net average profit of $15.76 per ton.

Do the conditions as herein stated offer an opportunity for the meat-growers and exporters of the United States?

FRANK H. MASON,
Consul.

UNITED STATES CONSULATE,
Marseilles, December 2, 1887.

INSPECTION OF AMERICAN PORK AND LARD IN SPAIN.

REPORT OF MINISTER CURRY.

I inclose a translation of a royal order instituting additional regulations in reference to the inspection and possible destruction of imported lard and pork, and prescribing fees for the service.

J. L. M. CURRY.

UNITED STATES LEGATION,
Madrid, November 25, 1887.

[Translation.]

Ministry of Interior circular.

For the proper execution of the provision contained in separate Section II, article 73, of the regulation of maritime health, in reference to the inspection of pork and lard proceeding from the United States of America and Germany, the King (whom God may guard), and, in his name, the Queen Regent of the Kingdom, has been pleased to order the observance of the following regulations:

(1) The prohibition established by royal orders of February 28 and July 10, 1880, in regard to the importation into the peninsula and adjacent islands of lard proceeding from the United States of America which has not been melted, continues in force.

(2) Pork proceeding from the United States of America and Germany shall be submitted to a stringent and microscopical examination, to be made by the directors of maritime health, assisted, when the necessity of an immediate dispatch of the goods demands it, by the second physician of the bay and by the secretary (secretario medico).

Said examination shall be made in a place belonging to the custom-house or to the director of health, in accordance with the opinion of the collector of customs, the directors of maritime health being provided to that effect with a microscope which may magnify at least 100 diameters and accessories, to be obtained at their own expense. In order to reimburse themselves of these expenses and as a remuneration for the service they shall collect the following fees:

	Pesetas.
Cases containing up to 100 hams, for each case	2.00
Cases containing up to 300 shoulders, feet, knees, or tongues, for each case	1.50
Cases containing up to 30 pieces or flitches of bacon, with their muscular part, for each case	1.50

The above-mentioned cases containing a number of pieces greater than the one put down shall pay, according to the fraction which may result, the proportionate part of the stated sums with relation to the number of pieces of the fraction.

(3) Meats containing trichinæ shall be thrown into the sea at a convenient distance from the port and with due precautions.

The same destination shall be given to the lard not obtained through fusion when the parties concerned do not prefer re-exporting it.

(4) Lard obtained through fusion, and bacon without muscular part, are exempt from a microscopical examination, and therefore from the payment of fees.

(5) The royal order of July 14 ultimo relative to this service is abolished.

By royal order I inform you of this for its exact fulfillment and for the knowledge of commerce and directors of health. This royal order is to be published in the official newspaper of that province.

God may guard you for many years.

Madrid, 9 November, 1887.

LEON Y CASTILLO.

To the GOVERNORS OF THE MARITIME PROVINCES AND GENERAL COMMANDER OF CEUTA.

THE NEW SWISS TARIFF.

REPORT OF CONSUL-GENERAL WINCHESTER.

The regular December session of the Swiss Federal Assembly convened on the 5th instant and adjourned last Saturday (24th). The only important legislation was the passage of the new tariff law, which has been pending for more than a year owing to differences between the two houses. This law makes a considerable advance along the entire line of the customs duties, and in some classes a most remarkable increase; for instance:

Articles.	Rate.	
	Old tariff.	New tariff.
	Francs.	*Francs.*
Cattle, per head	5	25
Hair manufactures, per quintal (200 pounds)	50	100
Certain woolen clothing, per quintal	80	120
Classes of silk, do	100	200
Embroidery and lace work, do	60	100
Cigars, do	100	150
Tobacco, do	50	75
Jewelry, in gold or silver, do	100	300
Shoes, do	40	70
Leather gloves, do	100	200
Hats, not finished, do	30	100
Hats, finished, do	30	150

It will go into effect in ninety days from publication, unless a *referendum* be demanded, which is not probable. There can be no doubt that this measure is purely retaliatory. The treaty with Italy expires with this year, and there is no prospect of its renewal; and after January 1, 1888, Switzerland will have only her French frontier commercially open, the treaty with France extending to 1892. The large increase of the duty on cattle (400 per cent.) has occasioned the greatest surprise, at least to outside observers, for it is the imposition of a heavy tax on a food staple which Switzerland largely imports, her own cattle being almost exclusively retained for dairy purposes. The latter fact is well shown by the current price of beef, furnished from imported cattle, being less than that of veal, which is usually the native male calves not required for breeding. These cattle for the market come in great numbers from Italy and to the cantons bordering on that country, and so, being dependent on it for their beef, this tax will be severely felt, and it is just possible a *referendum* may be called for from these cantons. In event of this there would be no doubt of the popular vote sustaining the action of the Assembly, for this special feature of the new tariff is regarded as a concession to the large peasant population of Switzerland interested in breeding cattle. Whilst it is difficult to see wherein they are to be benefited, for they furnish but an insignificant percentage of the beef cattle, and breeding cattle are exported and not imported as a rule, it goes to illustrate that the Swiss peasants, like the agricultural class generally throughout Europe, impatient of the prolonged and increasing shrinkage in their profits and unmindful of the true causes, are blindly striking out for the imaginary panacea of protection. Thus it is seen everywhere in Europe, with the extension of political power to the rural population there are signs of a tendency to curry favor by taxing foreign products even at the cost of dear bread and meat. Everywhere dynastic solidity seeks further intrenchment by preaching this nostrum to the rustics. Whilst we are daily informed of the imminent prospect of an armed conflict bursting upon Europe at any moment, a commercial war is already raging. At Berlin, Paris, Vienna, Rome, and even Berne, a feverish activity is shown to be on the defensive for fear of an invasion of the enemy, that is, the manufactures that compete with native products. And no exemption is made in favor of the necessaries of life; articles of food are treated exactly like pig-iron or shoes. The true key to the situation in Switzerland, as previously stated, is to be found in a feeling of retaliation. The treaties with Germany, Austria, and Italy denounced, and unable to secure the renewal on any reasonable adjustment of customs duties, with these duties largely increased upon everything going out from Switzerland into the countries constituting the principal market, some allowance must be made for the legislators yielding to such a statement even in the consideration of so far-reaching and fundamental a question.

The Old World nations are so huddled together, in comparison with the distant position of our country, that the effect of a move on the part of one government upon all the others is difficult for our people to realize in its full significance. It is fortunate to be so far away from the other commercial centers as not to be obliged to adopt retaliation as the chief rule of international business.

BOYD WINCHESTER,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berne, December 28, 1887.

CHANGES IN THE RUSSIAN TARIFF.

TRANSMITTED BY CONSUL-GENERAL WAY.

Copy of changes in the Russian tariff promulgated officially this 24th day of November, 1887.

By advice of the council of the Empire, approved by His Majesty the Emperor, the 7-19th November, the entry duties of the undermentioned goods are fixed as follows (duty paid in gold):

	Ruble.
ART. 22. Living and dried plants:	
Sec. 1. Hay and straw, raw	(free)
Sec. 2. Certain parts of plants and seeds not enumerated separately, per pood	.10
Sec. 3. Living plants, living or dried flowers and leaves (dyed or not dyed), onions, dried roots of flowers, prepared straw and medicinal plants, per pood, gross	.50
N. B.—The observation which follows this paragraph in the printed tariff is not changed.	
ART. 24. Raw vegetable textile materials:	
Sec. 1. Cotton:	
a Imported by sea, per pood	1.00
b Imported by land, do	1.15
ART. 35. Machines and agricultural instruments, without steam motor, not separately mentioned, and their models, per pood	.70
N. B.—The observation which follows this article in the printed tariff is unchanged.	
ART. 50. Fruits and berries, with the exception of dried fruits and conserved vegetables:	
Sec. 3. Sweet oranges, lemons, and bitter oranges, per pood, gross	.70
ART. 66. Herrings, salted and smoked, stock fish, and all other kinds of dried fish, per pood, gross	.27
The observation to articles 65 and 66 in the printed tariff is not changed.	
ART. 72. Spices:	
Sec. 3. Cloves, cinnamon, pepper, ginger, star anise, and all kinds of spices not separately mentioned, per pood	3.00
REMARK.—The teas of Kiahkta, imported by way of the Irkoutsk custom-house from the Chinese frontier and the Amour, will pay an entry duty of:	
A The black teas of Baiklow, the flower teas, and the yellow teas, per pood, in gold	13.00
B Pressed teas (in bricks), do	2.50
C Pressed teas in tablets having a consul's certificate proving that they are of Russian manufacture, or bearing on each tablet the brand of the Russian manufacturers, do	6.00
ART. 91. Wadding of carded cotton or in sheets, per pood	2.00
ART. 92. Cotton thread:	
Sec. 3. Thread of twisted cotton:	
a Sewing and knitting thread for retail sale, per pood, brut	6.00
b Thread twisted double, triple, etc., per pood, gross	7.00
ART. 151. Patent medicines of which the entry in Russia is authorized, per pood	20.00
N. B.—The observation which follows this article in the printed tariff remains the same.	
ART. 180. Joiner's work:	
Sec. 1. Executed of ordinary wood without being varnished or veneered, and in this number birds' cages and wooden boot-trees	.70
N. B.—The observation in section 1 of this article remains the same.	
ART. 192. Heavy stuffs of flax, hemp, jute, etc.:	
1. Sail cloth, per pound (of 14 ounces)	.20
2. Mattress and furniture ticking, carpets, and stuffs for covering furniture, of flax, hemp, and jute, likewise all stuffs made up of flax, hemp, jute, with or without cotton, per pound	.50

	Ruble.
ART. 214. Cotton tulle:	
Sec. 1. For furniture (antigras) with embroidered designs, also window curtains, per pound	1.50
Sec. 2. All kinds of tulle, excepting the above, plain or embroidered, do	3.50
ART. 215. Lace:	
Sec. 6. All hand-made lace, and silk blonde made by machinery, do	6.60
Sec. 2. Lace made by machinery, excepting silk lace, do	3.50
ART. 220. Buttons:	
Sec. 1. Mother of pearl, brass, or metal buttons, with the exception of gold, silver, or platina buttons (article 159), likewise all buttons covered with flax, cotton, wool, and silk, do	.60
Sec. 2. Buttons of porcelain, glass, wood, or bone, etc., do	.30
ART. 222. Black bugle, glass, or metallic beads:	
Sec. 1. On strings, but not yet applied as trimming, per pood	4.00
ART. 227. Toilet articles not specially indicated, mounted or not mounted:	
Sec. 1. Valuable articles in the manufacture of which silk, aluminium, mother of pearl, coral, tortoise shell, ivory, porcelain, enamel, amber, etc., or brass, gilt, or silver plated metals, metallic compositions have been employed; and all ornaments of mother of pearl, tortoise shell, ivory, and amber not separately enumerated, per pound	2.00
Sec. 2 Ordinary articles with ornaments or parts of non-precious metals, of metallic compositions neither gilt nor silver plated, of horn, bone, wood, meerschaum, whalebone, or other cheap materials, likewise all articles not specially indicated and made of horn, bone, meerschaum, whalebone, etc., do	.45
4th observation. The entry duties of section 2 are decreased by half and are paid for as articles of toilet in copper, brass, cast-iron, iron, steel, and zinc which weigh less than 3 pounds per piece, and which are covered with no ornaments of price.	
N. B.—The observations 1, 2, and 3 to the preceding article remain unchanged.	
ART. 234. Time-pieces:	
Observation to sec. 1. Mantle clocks and room or traveling clocks of which the mechanism can not be detached pay an entry duty according to the nature of the material employed for their manufacture, their mechanism paying separately an entry duty per piece	.90

PEARL BUTTONS AND DUTIES ON RAW MATERIALS.

REPORT OF CONSUL-GENERAL JUSSEN.

The manufacture of pearl buttons is not an industry of the United States, and probably never will be. The reason why this industry can not thrive in the United States is quite obvious. Pearl buttons can not be manufactured by machinery, but owing to the brittle nature of the raw material they must of necessity be made by hand. This hand labor is performed at the low rate of from 5 to 7 florins per week (or from $2 to $2.80 per week) in Austria as well as in France, so that the competition of the American laborer is out of the question.

None but the finest quality of pearl buttons, designed for ornamental purposes, such as sleeve buttons, etc., have ever been manufactured in the United States, and only in case machinery could be employed would American competition in the manufacture of common pearl buttons, ranging in price at the place of manufacture in Austria from 80 kreuzers, or 32 cents, to 2 florins, or 80 cents, per gross be possible.

The Austrian manufacturers enjoy another advantage in this, that the cost of transportation of the raw material, which is obtained in Asia Minor, is of course much lower to the port of Trieste than to any American port.

The declared value of pearl buttons, averaging in price from 32 to 80 cents per gross, exported from Austria to the United States during the year 1886, amounted to $1,681,746.61, and I am informed on good authority that the value of this class of buttons exported to the United States from France during the same period amounted to about $600,000.

The total annual import of pearl buttons by the United States amounts therefore in round figures to $2,300,000.

EFFECT OF DUTIES UPON RAW MATERIALS ON THE EXPORT TRADE OF THE UNITED STATES.

That our duties upon raw materials seriously impede the competition of American manufacturers in foreign markets, and enable European manufacturers to sell their products close to our very doors, is not to be disputed.

I find on reading the reports of the Austrian consuls that Austria exports furniture to Havana and the South and Central American states in considerable quantities. The low rate of wages paid to Austrian skilled laborers does not explain this fact, because hardly any machinery is in use here in manufacturing furniture, while in the United States the greater part of this labor is performed by machinery.

Machine labor can undoubtedly compete successfully with hand labor, be the latter ever so cheap. The true explanation of the importation of Austrian furniture into the Havana and South and Central American states is to be found in the fact that we impose a duty upon raw material used in the manufacture of furniture, and that Austria admits this material either free of duty or at a comparatively low rate of duty.

Marble, raw and cut in blocks or slabs, is free under the Austrian tariff; also all kinds of cabinet wood, raw or prepared, European or foreign; while under our tariff marble of all kinds, rough or squared, pays a duty of 65 cents per cubic foot, and when veined, sawed, or dressed, or otherwise, $1.10 per cubic foot; black walnut pays duty as sawed lumber, and all manufactured wood not otherwise specified 20 per cent. ad valorem.

Under the Austrian tariff all veneers not colored, and unpolished pay a duty of 60 cents per 221½ pounds, and colored or polished veneers $1.20 on the same weight. The American tariff imposes a duty of 35 per cent. ad valorem upon all veneers produced by cutting.

Cast polished looking-glass plates pay a duty under the Austrian tariff of 60 cents for every 221½ pounds without regard to the size of the plate; while the United States impose a duty of from 4 to 60 cents per square foot, according to size of plate.

Curled horse-hair, prepared for upholstery purposes, is admitted into Austria free of duty; under our tariff, however, this article is subject to a duty of 25 per cent. ad valorem.

Wool, the raw material out of which woolen damask and other furniture coverings are manufactured, pays no duty under the Austrian tariff, while we impose a duty ranging from 2½ cents to 36 cents per pound.

With this difference in the tariff of the two countries, it seems quite feasible that the Austrian furniture manufacturer, though he labors under a disadvantage as regards transportation, can export furniture to our neighboring states without much fear of competition on the part of the manufacturers of the United States.

Although Austria-Hungary, in common with the other countries of the European continent, has adopted the policy of a high protective tariff as to its manufactures, which policy, by the way, has brought it close to the brink of an industrial crisis, through its indirect but inevitable effect upon the export trade, it has not gone to the extreme of imposing a duty upon raw materials.

Aside from the raw materials used in the manufacture of furniture, I find the following on the free list of the Austrian tariff:

Stone and ores of all kinds, in the rough or hewn or sawed. (United States tariffs, 10 to 20 per cent. ad valorem and $1 per ton.)

Dyeing and tanning articles, refined and ground. (United States tariff, 10 per cent. ad valorem.)

Flax, hemp, and jute, raw or bleached or dressed. (United States tariff, flax, $20 to $25 per ton; jute, 20 per cent. ad valorem.)

Silk, raw, twisted. (United States tariff, 50 cents per pound.)

Floss silk, raw or bleached. (United States tariff, 50 per cent. ad valorem.

Copper, old broken. (United States tariff, 3 cents per pound.)

All chemical auxiliary materials, as borax, sulphur, etc.

WORKS OF ART, BOOKS, PERIODICALS, AND SCIENTIFIC INSTRUMENTS.

Austria has not enjoyed the gratifying consciousness of a surplus in its treasury for many years. The national budget labors under a chronic deficiency, which, of late, has increased from year to year. The Government has imposed taxes and created sources of revenue in every conceivable direction. Even the demoralizing institution of a state lottery is tolerated because the 9,000,000 or 10,000,000 florins derived annually from this national game of chance can not be spared from the column of receipts; but, lamentable as the financial condition of the Empire may be, no attempt has ever been made to levy a tax upon the intellectual pursuits of the people by means of a tariff upon books and periodicals, or to impede the development and culture of artistic taste by subjecting works of art to an import duty.

Under No. 348 of the Austrian tariff all books, prints, newspapers, maps, and sheet music are declared free of duty.

Pictures of all kinds, copper and steel engravings, wood-cuts, chromos, photographs, colored prints on paper or linen, etc., are free.

Paintings in oil, on wood, metal, or canvas are free.

Statues of stone, bas reliefs, etc., weighing more than 5 kilograms, life-size statues, and busts of metal or wood, are free.

All instruments for scientific purposes, astronomical, mathematical, and surgical, out of whatever material they may be composed, are free.

EDMUND JUSSEN,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Vienna, December 30, 1887.

PACKING AND SHIPMENT OF AMERICAN COTTON.

REPORT OF COMMERCIAL AGENT HAWES.

The American cotton bale, as received here, has always about the following dimensions: 68 by 22 by 30 inches, and weighs about 400 pounds, worth about 5¼ pence, English, per pound.

The Indian bale measures about 49 by 21 by 16 inches, and weighs over 400 pounds, valued at about 4¼ pence per pound.

A limited amount of Egyptian cotton is also received here, and is only excelled in quality by our sea-island cotton; it is worth about 6 1/16 pence per pound. The bales measure 51 by 32 by 23 inches, and weighs about 700 pounds.

Bengal cotton is worth only 3¼ pence per pound and is also in considerable demand. These bales measure about the same as the Indian, and weigh over 300 pounds.

I can not better illustrate the conditions in which these varieties of cotton reach this market than by the inclosed photograph,* which shows, side by side, bales of each variety. It will be noticed that while the oriental cotton is in good condition, the American bales present many rents through which cotton is escaping. These rents are not due to the sampling, as the Department has suggested, but to the poorer quality of sacking, defective hooping, and lack of sufficient compression. Even Egyptian waste is packed better than American cotton.

Cotton bales are handled by stevedores, etc., by means of iron hooks, by which they are enabled to "get a hold on" the bale. Each time such a hook is used on an American bale a rent is left through which the loosely-packed cotton escapes. In this connection I inclose herewith samples of bagging used on American and foreign bales, in order to show that the former is too loosely woven and lacking in strength. From the photograph it will be seen how much more securely hooped is the foreign bale. It will also be seen how much more space is required to store the American bale than its foreign competitor.

On August 11 last the steamship *City of Montreal* was burned at sea during her voyage from New York to Liverpool. Her cargo was largely American cotton. An investigation was ordered by the board of trade at Liverpool, with the view of ascertaining the cause, and the following facts were brought out:

The cotton shipped on the steamship *City of Montreal* was free from oil, grease, or dust. Several samples were forwarded to Liverpool and examined by Dr. Dupré, professor of chemistry, and they were found to be very clean and free from dirt.

While the cotton was being loaded the utmost precaution was taken, electric lights being used, and workmen not being allowed to smoke.

The question whether the fire had been caused by the cotton being too near the boiler or engine room was answered in the negative by Dr. Durpré, who stated that a temperature of at least 1,000 degrees is necessary to cause combustion. The cotton could be put on top of the boiler without danger.

*Not published.

The board of trade also occupied itself with the question as to whether American cotton as it is now packed would readily ignite, and what steps could be taken to avoid such ignition.

The evidence produced showed that American cotton is packed in bagging of the worst quality, which is very easily torn. This bagging is so loosely woven that the cotton can be seen through it. The ends of the bales are often not covered at all, or only partially covered, so that the cotton escapes. The steel (?) bands are so badly riveted that they often get loose and spring off, and consequently the bales are very often put on board in a very bad condition, the cotton protruding at the sides and ends. In this condition they are very liable to take fire should a spark come in contact with them. Mr. Dupré states that under these circumstances fire spreads with the rapidity of gunpowder.*

Further testimony showed that Indian or Surat cotton is much better packed. The bales are pressed very hard, and have thick, closely-woven, and strong bagging, through which no cotton is seen. They are bound with steel (?) hoop-iron which makes from thirteen to fifteen turns, and is riveted very strongly. Cotton seldom, therefore, escapes from these bales. A spark falling upon such a bale would probably be extinguished without causing fire. Other experts also testified as to the great difference between American and foreign bales, and agreed that the former would ignite from ten to twenty times as easily as the latter.

The question as to whether American or Indian cotton is more liable to spontaneous combustion showed upon investigation that American cotton was much cleaner than the Indian article. Samples of the cotton shipped by the steamship *City of Montreal* contained 2 per cent. dampness; 7 per cent. greasy matter; 1 per cent. resinous matter; 1.56 per cent. organic matter soluble in water; 1.46 per cent. organic matter not soluble; in all, about 12 per cent. of foreign substances, while the Indian cotton contained about 17 per cent. of impurities. These substances, however, were not sufficient to cause spontaneous combustion.

Cotton containing much oil or grease will spontaneously ignite at a temperature of 250° F., but such ignition on the *City of Montreal* was out of the question.

The board was unable to determine whence came the spark that destroyed the steamer in question, but evidence showed that matches and other combustibles had been found in the hold of steamers among the bales, and that fire had been caused by a bursted hoop striking fire. "But one thing is certain," concludes the report, "if this cotton had been packed like the Surat cotton there would be less probability that the fire was caused by a bursted hoop, and the same would probably not have spread had a match or other combustible ignited."

Under date the 24th ultimo, the Imperial and Royal privileged Austrian Insurance Company "Donau" published the following

* In some experiments made by myself I made minute cotton bales, closely packing some and winding them with wire, while others were less closely packed and free cotton left protruding. Upon the application of a match-flame the loosely-packed bales ignited and spread with a rapidity truly resembling the combustion of gunpowder unconfined. Upon the application of a spark only the loosely-packed bales readily ignited and the fire easily penetrated the bale, while the closely-packed cotton could scarcely be ignited, and the fire extinguished itself upon reaching the wire.

list of casualties which have recently occurred on vessels carrying American cotton:

Steam-ship *Resolute*, from Savannah to Liverpool, was found to be on fire just before sailing, and had to be pumped full of water. The bales burst.

Steam-ship *Desoung* arrived in Philadephia from Savannah with fire on board.

Steam-ship *Naples*, from Savannah to Liverpool. Fire broke out in port and the steamer had to be partly filled with water; 5,700 bales of cotton were already loaded, of which 500 were damaged. The vessel was much injured.

Steam-ship *Kate Fawcett*, from Savannah to Genoa. Fire broke out on board, but the details are not yet known.

Steam-ship *Hugheden*, from Savannah for Barcelona. Fire broke out when 3,400 bales had been loaded; 1,700 damaged.

Steam-ship *Bathal*, from Charleston to Bremen, caught on fire, and 2,800 bales of cotton were damaged. The vessel had to be repaired.

Steam-ship *Parkland*. Fire on board; cargo consists mostly of cotton; goods must be discharged.

Steam-ship *Dorset*. Fire on board; cargo consists of 1,200 bales of cotton; details unknown.

Steam-ship *Ashadell*, a vessel with cotton, burned in Savannah Harbor, damaging somewhat this steamer.

Steam-ship *Sylvia* caught fire in Savannah; 7,500 bales on board; cargo forward damaged.

Steam-ship *Brookfield* caught fire at Baltimore; cargo 3,000 bales of cotton; partly damaged.

Steam-ship *Katie*, arrived from Augusta in Savannah; ran ashore in Savannah River; while trying to get off the cotton caught fire; 340 bales thrown overboard; vessel severely damaged.

Steam-ship *Nawarth Castle* caught fire at New Orleans, which spread to the steamship *Kingdom*. Damage to each vessel small.

Steamship *Regulator* caught fire at Wilmington, with 1,000 bales on board. Total loss.

At present European companies insure American cotton at the same rates as the Oriental article, but it is not at all unlikely that in consideration of the action of the American companies European insurance companies may act likewise. One of our greatest commodities would thus have an additional burden to carry which can easily be avoided.

All cotton arriving in this market from America, no matter from what section, presents the same appearance. The same system of packing seems to prevail through all the Southern States.

In concluding this report I should express my appreciation of the courtesy of Vice and Deputy Consular Agent Hermann, Baron Liebig, and Mr. Redehammer for placing their warehouses at my disposal, and for much information on the subject of cotton, which they handle in large quantities.

JNO. B. HAWES,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Reichenberg, November 3, 1887.

PROJECTED RAILWAYS IN GREECE.

REPORT OF CONSULAR AGENT McDOWALL.

There is at present considerable talk about the construction of new railway lines in Greece, a few particulars of which may be of interest, and especially so to contractors for such undertakings in the United States.

On the 7th instant a bill was laid before the deputies in Athens by the Greek Government, requesting powers to proceed with the con-

struction of a line of railway from Miious-Nauplia to Calamata. According to the terms of the said bill, this line is to be built and wrought under the immediate supervision of state officials, and in fact is to be state property.

The line will be meter-gauged, and will be built in accordance with plans and specifications drawn up by engineers of the French mission to Greece, with right of alteration and deviation from them if found expedient.

For the carrying out of this work the minister of finance asks to be empowered to issue interest-bearing bonds, with sinking fund, to the amount of 24,000,000 drachmas, payable all, or in part, in coin or bank-notes, as may be decided later, and for security of said bonds gives the revenue of the railway, and should this prove insufficient other unburdened revenues of the state will be given.

The length of this line will be about 250 kilometers, and pass right across the Peloponnesus.

Another bill is also before the house, which the Government asks the deputies to pass, for the making of a line of railway by a Belgian firm. This line is to connect Missolonghi and Agrinion; about 44 kilometers long and meter-gauge.

This is also to be a state line, and is more for military and strategical than for commercial purposes.

The Belgian firm offers to build and equip this line for the sum of 85,380 francs in gold per kilometer, so that the line when completed will have cost, including making and rolling stock, etc., 3,756,720 francs (or about $725,000); this sum to be paid to the contractors in two equal installments. To raise this sum the Government propose issuing bonds of the value of 500 francs each, with yearly-interest coupons of 30 francs attached; these bonds to be paid off in ninety-nine years by annual drawings, and, finally, the line to be ready for traffic in 1890.

An extension of the Pirri-Peloponese line (which is now completed to Patras) from Patras to Pirgos is being pushed on rapidly, and will be finished and ready for traffic by the end of 1888.

A. C. McDOWALL,
Consular Agent.

UNITED STATES CONSULAR AGENCY,
Piræus, December 9, 1887.

DANISH BEET SUGAR INTERESTS.

REPORT OF CONSUL RYDER.

At a meeting lately held by the shareholders of the Danish beet-sugar refineries, a statement was placed before them showing the profits of the past year's operations to have been 102,072 kroners, with a reserve fund of 371,516 kroners (1 kroner = 26.8 cents), but in reference to which the president found it to be his unpleasant task to state that the great fall in prices which had occurred since the closing of the company's accounts, respectively on the 1st January and 30th April, would have entirely absorbed these amounts, and this statement will unfortunately be found fully confirmed by the accounts now laid before them, inasmuch as the differences in the prices upon the stock on hand carried over from the previous year's

balances, compared with the prices taken as the estimation of the past year's stocks, will be found to be 430,232 kroners—that is to say, pretty nearly approaching to the two first-named amounts, and no opportunity has shown itself by a rise in prices throughout the course of the year towards any recovery of this price difference, the average price during the period from the 1st May, 1866, until the 30th April of this year having been the lowest price known in any previous year, having even been considerably lower than in the sugar crisis year of 1884–'85. In that year the average price of sugar delivered free on board at Hamburg was 12 shillings and 3 pence per cwt., whilst in the previous year it had been 19 shillings. In 1885–'86 the average price for the same delivery was 14 shillings and 8 pence, whilst the price last year was no more than 11 shillings and 2 pence. Subsequently to the 1st May a steady advance in prices would, however, appear to have set in, which, if the company were now making up its stocks, would give a couple of hundred thousand kroners to the good on the coming year's account, unless a change should again take place, of which, however, there is no appearance at present.

BOUNTIES.

One cause for this rise in prices may be placed to the great reduction on present stocks, namely, of about 200,000 tons; but stronger grounds may also doubtless be found, in that both Germany and France have found themselves compelled to make changes in their tariffs, as neither of these countries could support the drains on their budgets occasioned by these export bounties, namely, so far as Germany is concerned, of 40,000,000 reichmarks, and for France of 60,000,000 francs. There are, therefore, good grounds for hoping that the demoralization in the sugar industries and the sugar markets is now approaching "the beginning of the end."

It would seem now to be fully proved that both the German and French sugar industries, even with the advantages afforded by these export premiums, can only meet with success under the most favorable circumstances, whilst the other fabrics keep holding on in the hopes of better times; but in proportion as the bounty premiums may be reduced, so will these gradually disappear from the scene, and the production thereby be so much diminished that a general rise of prices in the sugar markets may be looked for, for so soon as the state treasuries are no longer able or willing to pay a part of the costs of production the consumers will then have to do so; but this will be no great evil, when it is considered that prices at the present time are under the half of what they were a few years back.

Germany's export premium is at present 1¾ öres for raw sugars and 2½ for refined.

The newly sanctioned custom dues may be considered as reducing this premium by 1 öre, so that it will yet remain at 1½ öres. If the German factories were not favored by these bounties a large number of them would unquestionably have to cease work, unless a proportional rise in sugar took place, and as a discontinuance of these bounties may before long become a fiscal necessity, an advance in prices will in such case as surely follow. Until that time arrives the sugar refineries here must continue to keep their works going and the shareholders be satisfied with the consciousness of the indirect benefits which they are outwardly conferring, both in respect to agriculture as well as to the laboring classes, and which is best evidenced by the amounts paid out, namely, 2,953,947 kroners for

3,693,633 cwt. of roots and 1,071,271 kroners in direct labor wages to the cultivators of the roots, and others. That the culture of these roots has in the past year been one of the most profitable branches of agriculture is best seen from the result given of the company's own farming operations, which yielded a surplus of 20,000 kroners, although the company has to pay a rent of 40 kroners ($10.72) per barrel of land measure (1⅛ acres), in addition to taxes.

In order that this industry should be in a position to yield favorable returns to the shareholders it would appear that either an advance of 2 öres on sugar prices should be obtained, or that the contracts for roots deliveries must be reduced by 15 to 20 öres per centner.

The result of the year's operations of these sugar refineries, leaving out of consideration the before-mentioned loss on reduced value of stocks, may, however, so far be considered satisfactory for a year when prices have been several per cent. less than the lowest in any previous year.

The area sown this year with sugar-beets is stated to be some 2,000 barrels of land below that of the past year, inasmuch as the company would not enter upon fresh contracts, except at lower rates, such diminution of culture representing a loss of about 6,000,000 pounds of sugar, which will have to be replaced by imported sugars.

HENRY B. RYDER,
Consul.

UNITED STATES CONSULATE,
Copenhagen, December 23, 1887.

CEREALS AND LIVE-STOCK TRADE.

REPORT OF CONSUL RYDER.

1. CEREALS.

The grain harvest yield of Europe, the United States of America, Algiers, Egypt, the Canadas, Chili, Australia, and the East Indies, in the years 1878 and 1881, were estimated of the value of a yearly average of 24 milliards of kroners (1 kroner = 26.80 cents); whilst the value for the year 1884 was only placed at about 19½ milliards. A part of this considerable reduction in value is said to be due to the changes made in the last-named year by Russia and Hungary in their mode of calculating the harvest values, as opposed to the system pursued by those countries in previous years.

Taking, therefore, into account the reduction occasioned by this new system, it is remarked that the agricultural classes throughout the universe, from the continued depressed prices of grain, have been subjected to a reduction on their harvest earnings alone on cereals for the year 1884, as compared with the averages of 1878 end 1881, of about 2,500,000,000 kroners.

As regards the international trade movements in cereals during the six years which the compiled statistical returns bring under public notice, the collective values of these are seen to have been as follows:

	Kroners.
1879	6,437,000,000
1880	5,932,000,000
1881	5,364,000,000
1882	5,651,000,000
1883	5,356,000,000
1884	4,717,000,000

The international organization of the grain trade, which especially since 1869 has received such enormous development, would thus appear, in so far as value is concerned, to have attained its culminating point in 1879. As a natural consequence, this trade must always be depending in great degree upon the harvest yield of the different countries throughout the world.

The decline in 1884 in the aggregate value of this trade is thus found to have been due to the circumstance that most of the European grain countries in that year were favored with good harvests, so that with greatly reduced imports in the European markets, combined with the very abundant harvest in the United States, grain prices were brought down to unusually low rates.

In accord with the main results, a falling off is to be seen in the aggregate grain movements of 1882–'84, in so far as thegreater part of the different countries are concerned. An increase is only to be noticed in the German Empire, the Netherlands, Italy, Australia, Egypt, and the Argentine Republic. Strange to say, Germany, with her high grain import duties, in contrast with other grain-importing lands, in the years 1882–'84 appears to have had an increase in the value of her grain imports (the value in 1882 being given as 368,600,000 marks, in 1883 with 370,500,000, and in 1884 with 401,300,000 marks).

2. LIVE STOCK.

By the side of the international grain trade, the trade in live stock and animal products is the most important branch of the great trade movements of the world. As is well known, the power of the European lands to supply themselves with the needful animal products has in the later years been steadily declining, for the reason that their relative holdings of live stock (that is to say, the numbers of live stock in proportion to the population) has constantly been diminishing. The average numbers taken from these official statistical tables show the following proportions of Europe's relative live stock for each 1,000 head of the population:

Year.	Horned cattle.	Sheep.	Swine.
1882	328	764	197
1857	355	724	156
1869	331	700	152
1880	302	568	140
The present time	302	589	138

By reason of the increasing population and prosperity, and from the resulting increased consumption of animal food, Europe is now very far from being able to supply the demands for all animal products, and is thus compelled year by year to call for increasing imports from foreign regions.

The imports into Europe have been to the following extent, viz:

Year.	Horned cattle.	Sheep.
1879	64,387	520,452
1881	81,393	488,827
1884	132,072	672,423

Solely as regards swine does Europe still maintain a regular surplus export.

The imports from the non-European lands in the three above-mentioned years were of the following values, viz: 414,000,000 kroners, 358,500,000 kroners, and 367,500,000 kroners. Ten years ago this international branch of trade was most insignificant, but spite of tariffs and sanitary restrictions it has now risen to an imposing height. It is chiefly from America, Algiers, and the Australian lands that these supplies are received; and of the American states it is again the United States of America which is seen to be the chief purveyor.

The numbers of live stock in the United States has not only met with an absolute but also with a relative increase. From 1850 to the commencement of 1886 horned cattle increased from 17,800,000 to 45,500,000 head; sheep from 21,700,000 to 48,300,000 head, and the number of swine from 30,350,000 to 46,100,000 head—an enormous increase, which, with the exception of swine, has more than kept pace with the increase of population, as the following table will show, viz:

For each 1,000 *head of population.*

Year.	Horned cattle.	Sheep.	Swine.
1870	618	739	652
1880	716	701	950
Close of 1885	797	846	807

Comparing this table with the corresponding one for Europe, it is at once plainly seen how the imports from the United States of animal products has been enabled to reach its important preponderance.

In 1884–'85, after having succeeded in overcoming the difficulties of transport, the export values of cattle and slaughtered from the United States meat amounted to 284,000,000 kroners.

The great meat and cattle purveyors to Europe from other parts of America and Canada, with a value of exports in 1884 of 21,000,000 kroners, whilst the Argentine Republic in the same year exported for 14,800,000 kroners. As regards the Australian colonies the exports of slaughtered meats therefrom have been of stupendous growth, attaining in 1884 a value of 14,500,000 kroners against only 6,500,000 in 1881.

Lastly, Algiers is seen to take an important place in supplying the calls of Europe (especially of France) with animal products, the export from this quarter in 1884 having a value of 27,000,000 kroners.

The number of live stock held by those countries which above all others supply Europe with these products, and thus brought into competition with the European stocks, is as follows, viz.:

Countries.	Horned cattle.	Sheep.	Swine.
United States	45,500,000	48,300,000	46,100,000
Canada	3,500,000	3,000,000	1,200,000
La Plata States	24,000,000	105,600,000	400,000
Algiers	1,200,000	8,800,000	60,000
Australia	8,200,000	74,300,000	900,000
Together	82,400,000	240,000,000	48,660,000
European stock	100,400,000	188,100,000	46,830,000

The European stock is thus seen to be greater in so far as horned cattle are concerned; for swine, of about the same magnitude; but as regards sheep, of much smaller numbers than in these foreign lands, and it is especially in slaughtered sheep and in wool where the competition is most keenly felt in the European markets. As, however, the quality of the European products, taken on the whole, is superior to that of the foreign imports, it is chiefly the poorer kinds of these products which are the most exposed to this great competition, and the prices of which are most affected.

HENRY B. RYDER,
Consul.

CONSULATE OF THE UNITED STATES OF AMERICA,
Copenhagen, October 5, 1887.

DANISH DAIRY CATTLE EXHIBITION.

REPORT OF CONSUL RYDER.

I have herewith the honor to present a report on the exhibition to be held in this city in the course of the coming year.

The exhibits of agricultural products are comprised in the following groupings:

I. RAW PRODUCTS.

(*a*) Collection of seeds or bundles of one or more of the following classes of cultivated plants:
(*b*) Seed thrashed or in the straw.
(*c*) Fodder plants in seed or in buudles.
(*d*) Trade or febric plants in seed or bundles.

A temporary exhibit of roots and potatoes will be held, of which further notice will be given. Beef, pork, and lard are to be exhibited among industrial products.

II. MANUFACTURED AND REFUSE STUFFS, EXCLUSIVELY OR MAINLY USED IN AGRICULTURE.

(*a*) Fodder stuffs.
(*b*) Manuring substances.
(*c*) Straw litter and disinfectants for cattle stalls.

The produce of brick-works and of other building materials to be exhibited among industrial products.

III. SCIENTIFIC AIDS FOR THE ADVANCEMENT OF AGRICULTURE.

(*a*) Models of implements, machines, and agricultural buildings.
(*b*) Scientific collections of animals, plants, minerals, and soil samples.
(*c*) Apparatus for analysis of seeds.
(*d*) Apparatus for land surveying and leveling.
(*e*) Literary aids, such as books, charts, designs, etc.
(*f*) Land and water culture.

The following quantities shall, at the least, be sent in: Of grain samples, 20 pounds; seed samples, 3 pounds; fodder stuffs, 20 pounds; artificial manures and straw litter, 10 pounds; and of samples of other kinds in proportion thereto according to their special character. Grain and seed samples which are not exhibited in collective lots (at least 10 samples) must be analyzed at a public seed controlling station, and the analysis follow therewith. Artificial manures and straw litter must likewise be accompanied by an analysis certificate from the control office. As premiums, medals, etc., will be awarded; and sales of the exhibited articles can be made through the co-operation of the committee with the charge of 2 per cent. on sales price.

The dairy exhibition will embrace the following subdivisions:

I. DAIRY IMPLEMENTS.

A.—Wagons or other modes of transport of milk.
B.—Implements for straining, cream-setting, and skimming of milk, pails, dishes, milk-coolers, basins, etc.; milk centrifuges with their appurtenances and subordinate parts.
C.—Implements used in butter-making:
(1) Cream-casks, churns, etc.
(2) Butter-troughs, kneading-machines, kneading-boards, butter-cooling apparatus.
(3) Butter-packings, such as casks, boxes, jars, tins, etc.
D.—Implements for cheese-making:
(1) Cheese-forms, cheese-kettles, and the like.
(2) Cheese knives, lyres, forks, mills, etc.
(3) Cheese cups, rings, etc.
(4) Cheese-presses.
(5) Cheese-shelves.
E.—Heating and cooling apparatus for milk and cream:
(1) Steam-boilers.
(2) Heating apparatus.
(3) Cooling apparatus.
F.—Other implements in dairy use:
(1) Weights, measure, gauge.
(2) Pumps for dairy use.
(3) Coopers' work.
(4) Tinsmiths' work.
(5) Brush-makers' work.
(6) Apparatus for milk investigation.

II. DAIRY, MISCELLANEOUS.

A.—Different stuffs and materials in dairy use:
(1) Butter colorings.
(2) Cheese colorings.
(3) Cheese rennet.
(4) Salt, carraway, soap, soda, etc.
(5) Machinery oils, polishing materials.
B.—Flag-stones, clinkers, and other materials for dairy floors, lofts, or walls.
C.—Dresses for the dairy hands, for use in dairy-work.

III. SCIENTIFIC AIDS FOR THE ADVANCEMENT OF DAIRY INDUSTRY.

A.—Chemical instruments for dairy service.
B.—Models, drawings, and plans of implements, machines, and buildings employed in dairy use.

IV. DAIRY PRODUCTS.

A.—Milk and products of milk in preserved condition:
(1) Preserved and condensed milk.
(2) Preserved cream.
(3) Butter in hermetically closed packages.
B.—Butter for exhibit on July 18–22:
(1) Butter in one-third casks from dairies with a daily milk consumption of at least 500 pounds.
(2) Butter in voluntary package and quantity from a dairy with a daily milk consumption of less than 500 pounds.
C.—Cheese for exhibit on July 18–22:
(1) Cheese from sweet milk of ordinary fatness.
(2) Cheese from a mixture of sweet and skimmed milk.
(3) Cheese from skimmed milk of ordinary fatness, by the ice-water or tub system, or by a minor clean skimming with the centrifuge.
(4) Cheese from milk of somewhat clean centrifuge skimming.
(5) Other cheese sorts: (*a*) Cream cheese, (*b*) Whey cheese, (*c*) Appetite cheese, etc.

The committee will be willing, whenever the desire is expressed in the notice, to convey the exhibit objects from the Copenhagen railway or harbor to the exhibition building and there have them un-

packed and set up. They will also set up a steam-boiler, together with the needful connecting tubes, from which exhibitors, after permission has been granted, but at their own expense, may convey steam through the leading pipes as a forcing power for the centrifugal or other machinery exhibited. Butterine; cheese, with an admixture of foreign substances; artificial milk or cream, as also machines specially arranged for emulsion of fatty substances with milk, are excluded from the exhibition. Only such butter and cheese under the various classifications as may be considered of special eminence and importance will be treated as objects for adjudication and awarding of premiums

As premiums, the exhibition medal, with diploma, will be distributed, as also a special diploma to the makers of premium-awarded dairy products, in so far as the exhibitor himself has not personally conducted the manufacture.

CATTLE SHOW.

The cattle show, which is open to Denmark, Sweden, and Norway, is divided into two groups, viz, for breeding-stock and cattle for slaughter, these again having the following subdivisions:

I. BREEDING STOCK—HORNED CATTLE IN FOLLOWING GROUPS.

A.—Milch cows:
- (1) Angle or red Danish cattle of pure breed.
- (2) Jutland cattle of pure breed.
- (3) Cattle of other pure breeds or origin: (*a*) Lowland cattle, (*b*) Ayrshire and other kindred pure breeds, (*c*) Highland cattle.

B.—Cattle for slaughter:
- (1) Jutland cattle of pure breed.
- (2) Slaughter cattle of all other pure breeds.
- (3) Collective lots of young cattle.

II. HORSES.

1. Horses of heavy draught.
2. Horses of light draught or for riding use of 10 quarters or above.
3. Horses under 10 quarters and ponies.
4. Blood horses of pure race.

III. SHEEP.

1. Sheep for meat:
   - (*a*) Short wooled.
   - (*b*) Long wooled.
2. Sheep for wool.

IV. SWINE.

1. Large breeds.
2. Smaller breeds.

The cattle show for slaughter animals will be held from 29th to 31st May, and notice thereto must be sent on or before the 15th March, 1888. The show for breeding stock will be held from the 18th to 22d July, and notice must be sent to the office before the 15th April, 1888. Together with the notice the sum of 10 kroners will have to be deposited for each horse, 5 kroners for each head of horned cattle, and 2 kroners for each sheep or swine, which amounts will, however, be returned in all cases where the animals meet at the show.

Danish exhibitors of stallions and bulls over two and one-half years must at the time of entry, or previous to the arrival at the show, produce full evidence that the animal at some royal or society's cattle show has been awarded a premium, or acknowledged worthy of such, at an age corresponding to that which is here set forth.

On arrival at Copenhagen the animals will be inspected by a veterinary by whom a health certificate will be given entitling the animal to admission, whilst all suspected animals will be excluded.

Cost of transport by rail and steamer, as also all port charges, will be reduced in favor of exhibitors.

Straw, hay, green fodder, and water will be supplied free of expense to exhibitors; but grain and strong fodder will be charged for at the current prices.

In regard to the adjudications: As a general rule, and more especially with respect to males, the greatest possible consideration will be taken of the animals' descent and its offspring.

Animals of cross-breeds will be excluded from premium awards.

For premiums there will altogether be allotted an amount of 36,000 kroners ($9,700), 25 silver and 25 bronze medals, namely, for horned cattle (breeding stock), 20,000 kroners ($5,400), 17 silver and 17 bronze medals; for horses, 11,500 kroners ($3,100), 8 silver and 8 bronze medals; for sheep, 1,500 kroners ($405); for swine, 1,000 kroners ($270), and for animals for slaughter 2,000 kroners ($540).

HENRY B. RYDER,
Consul.

UNITED STATES CONSULATE,
Copenhagen, October 24, 1887.

AUSTRALASIAN STATISTICS.

REPORT BY CONSUL GRIFFIN OF SYDNEY.

The statistics of the Australasian colonies that have thus far been received for the year ended June 30, 1887, seem to leave no room for doubt that the honor of being the premier colony of the group belongs to New South Wales. The returns furnished their respective governments by Mr. T. A. Coghlan, statistician of New South Wales, and Mr. H. Hayter, statistician for Victoria, except in regard to population and agriculture, deal only with the statistics for the year ended December 31, 1886.

POPULATION.

The population of the two leading colonies are brought up to June 30, 1887, and the agricultural returns to the end of March for the same year. Victoria, which has held the premier position in population since 1853, was still in the ascendancy at the close of the year 1886, the figures being, Victoria 1,003,043 and New South Wales 1,001,966; but on the 30th of June, 1887, the two colonies stood, New South Wales 1,022,767 and Victoria 1,019,106, thus showing an excess of 3,661 for New South Wales. In 1851, when a separate government was given to Victoria, that colony started with a population of 97,489 against 197,168 for New South Wales. At the end of 1855 Victoria had increased her population to 364,324, whilst New South Wales increased hers to only 267,000. In 1861 Victoria had 541,800, and New South Wales 358,278. In 1871 the figures were, Victoria 731,528 and New South Wales 503,981. In 1881 they were, Victoria 862,346, New South Wales 751,468. It was noticed at the close of the decade in 1881 that the rate of increase in New South Wales was about 49 per cent., whilst that of Victoria was only 18 per cent. The race for supremacy after this period became less rapid for the elder colony, and although it had been predicted that New South Wales would be the first to reach the 1,000,000, the honor of that belongs

to Victoria, for at the close of March, 1886, Victoria had 1,001,750 and New South Wales 992,875.

The population estimates are made up by calculations based upon the last census, with the addition of excess of births over deaths and arrivals over departures occurring after the census was taken. It is well enough to remark here that this method of calculation is not absolutely to be relied upon, for in some cases all the births are not registered, and then, again, no account is kept of the arrivals and departures overland. It has been noticed in the returns for immigration and emigration that for a series of years New South Wales has enjoyed a marked supremacy over Victoria in the arrivals by sea. In 1884 the number of immigrants to New South Wales was 72,486, and to Victoria 72,202; but the number of departures by sea from the former colony during the year was only 40,254, whilst in the latter it was 58,061, thus showing an excess of immigration over emigration for New South Wales of 32,232 to only 14,141 for Victoria. In 1885 the number of immigrants to New South Wales was 78,138, and the number of departures 38,445. In Victoria the number of immigrants was 76,976, and the departures 61,994; excess of immigration for New South Wales 39,793, Victoria 14,982. Immigration in 1886, a year of great depression in New South Wales, received a decided check, and the number of arrivals was 70,388 to 93,404 for Victoria; but the departures were still greater from Victoria than from the other colony, New South Wales having 41,896 emigrants and Victoria 68,102, or an excess of immigration over emigrants for New South Wales of 28,492 and 25,302 for Victoria. At the close of 1886 the total population of the whole of the Australasian colonies was 3,076,763, of whom 1,860,813 were males and 1,565,750 females. Of the total population at the end of 1886 Victoria had 1,003,043; New South Wales, 1,001,966; Queensland, 342,614; South Australia, 312,758; Western Australia, 39,584; Tasmania, 137,211, and New Zealand, 589,386.

I am indebted to Mr. T. A. Coghlan for the following table:

Area of each of the colonies (estimated population), number of females to every 1,000 *males, and rate of increase or decrease, etc.*

Colony.	Area.	On December 31, 1886.					Total population on December 31, 1885.	Increase or decrease in 1886.	
		Estimated population.			Number of females to 100 males.	Number of persons to the square mile.		Numerical.	Per cent.
		Males.	Females.	Total.					
	Sq. miles.								
New South Wales.	310,700	551,343	450,623	*1,001,966	81.73	3,225	957,914	+ 44,052	+ 4.60
Victoria	87,884	531,452	471,591	*1,003,043	88.74	11,413	971,145	+ 31,898	+ 3.28
Queensland.....	668,224	201,624	141,590	342,614	70.43	513	326,916	+ 15,698	+ 4.80
South Australia...	903,425	162,980	149,778	312,758	91.90	346	313,423	— 665	— 0.21
Western Australia	975,920	23,044	16,540	9,584	71.78	041	35,186	+ 4,398	+12.50
Tasmania.....	26,375	73,328	63,888	137,211	87.13	5,202	133,791	+ 3,420	+ 2.55
New Zealand	104,335	317,646	271,740	†589,386	85.55	5,654	†575,226	+ 14,160	+ 2.40
Total	3,076,763	1,860,812	1,565,750	3,426,562	84.14	1,1.4	3,313,601	+112,961	+ 3.41

* In estimating the population of New South Wales and Victoria allowance has been made for unrecorded departures. On the 30th June, 1887, the population of New South Wales was 1,022,767, and that of Victoria, 1,019,106.

† Exclusive of Maoris, who at the census of March, 1886, numbered 22,868 males, 18,960 females; 41,828 total.

BIRTHS, DEATHS, AND MARRIAGES.

In the list of births New South Wales takes the lead of all the colonies in the group. The number of births in that colony during the year 1886 was 26,284, or 37.03 to every 1,000 population. In Victoria the number was only 31,824, or 31.24 to every 1,000 population. During the same year the number of marriages was greater in New South Wales than in Victoria, the figures being 7,811, or 7.99 to every 1,000 population; Victoria 7.373, or 7.84 to every 1,000 population. In Queensland, however, a greater number of marriages in proportion to population were solemnized than in either New South Wales or Victoria, the number to every 1,000 being 8.32.

Births, deaths, and marriages, and excess of births over deaths in each of the colonies for 1886.

Colony.	Births.		Deaths.		Marriages.		Excess of births over deaths.	
	No.	Per 1,000 of population.	No.	Per 1,000 of population.	No.	Per 1,000 of population.	No.	Per cent.
New South Wales	36,284	37.03	14,587	14.88	7,811	7.99	21,697	148.74
Victoria	30,824	31.24	14,952	15.15	7,737	7.84	15,872	106.15
Queensland	12,582	37.58	5,575	16.65	2,785	8.32	7,007	125.69
South Australia	11,177	35.69	4,234	13.52	1,976	6.31	6,943	163.98
Western Australia	1,466	39.31	806	21.56	297	7.94	660	81.89
Tasmania	4,627	34.14	1,976	14.58	985	7.27	2,651	134.16
New Zealand	19,299	33.14	6,135	10.53	3,508	6.02	13,164	214.57
Total	116,259	34.52	48,265	14.32	25,099	7.45	67,994	140.88

IMPORTS AND EXPORTS.

In both imports and exports New South Wales is ahead of all the other colonies, her imports during the year 1886 having amounted to $104,867,740 against $92,652,875 for Victoria. In exports for the same year New South Wales had $77,781,065 and Victoria $58,976,605; of the exports for New South Wales; $64,421,000 consisted of home produce and $13,360,065 consisted of re-exports or foreign produce. Victoria had during the same period $45.273,435 home produce and $13,703,170 of re-exports or foreign produce.

Value of exports and imports of Australasian colonies for the year ended December 31, 1886, together with the value per head of population.

Colony.	Imports.	Exports.			Total trade.
		Home produce.	Re-exports.	Total exports.	
New South Wales	£20,973,548	£12,884,200	£2,672,013	£15,556,213	£36,529,761
Victoria	18,530,575	9,054,667	2,740,634	11,795,321	30,325,896
Queensland	6,103,227	4,813,092	120,878	4,933,970	11,037,197
South Australia	4,852,750	2,822,138	1,666,870	4,489,008	9,341,758
Western Australia	758,013	626,594	3,869	630,393	1,388,406
Tasmania	1,756,567	1,312,416	19,124	1,331,540	3,088,107
New Zealand	6,759,013	6,386,682	286,109	6,672,791	13,431,804
Total	59,733,693	37,899,739	7,509,497	45,409,236	105,142,929

Value of exports and imports of Australian colonies, etc.—Continued.

Colony.	Per head of population.			
	Imports.	Export of home produce.	Total exports.	Total trade.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New South Wales	21 8 1	13 2 11	15 17 6	37 5 7
Victoria	18 15 5	9 3 5	11 19 0	30 14 5
Queensland	18 4 7	14 7 7	14 14 9	32 19 4
South Australia	15 10 0	9 0 3	14 6 9	29 16 9
Western Australia	20 5 7	16 14 8	16 17 2	37 2 9
Tasmania	12 19 3	9 13 9	9 17 6	22 16 9
New Zealand	11 12 2	10 19 4	11 9 2	23 1 4
Total	17 14 5	11 4 11	13 9 6	31 3 11

It will be seen from the preceding table that the imports per head of New South Wales are $107.02, whilst those of Victoria are $93.85. The imports per head of Queensland were $91.14. New Zealand shows lowest imports per head of any of the colonies in the group, the amount being $58.04. The exports per head of New South Wales were $77.25, and those of Victoria were $58.15. The colony having the lowest exports per head was Tasmania, the amount being $48.05. The value of the imports and exports per head of the Australasian colonies would at first appear something enormous, especially when compared with those of Great Britain, France, and the United States, the colonies in some instances being nearly two or three times greater; but it must be borne in mind that the movements of goods and merchandise in the Australasian colonies are altogether of a different character from those of other countries—as, for instance, in the United States goods may be moved thousands of miles, from Maine to California, without being known as imports and exports. Goods and merchandise must pass from one country to another in order to be known as imports and exports. If the United States were divided up into as many political boundaries as Australasia the return of the imports and exports per head would necessarily be very much larger. Mr. Pulsford, an able and scholarly statistician of this colony, has recently pointed out that the division of the original New South Wales into the three colonies of Victoria, Queensland, and New South Wales, has increased the record of what are called imports and exports during the last ten years by no less a sum than $1,000,000,000. Political boundaries have been set up with the result that all movements of goods across the new boundaries have been recorded, but no one could prove that these movements were based on any principles than those which existed before the country had separate governments or political boundaries.

SHIPPING.

The shipping of New South Wales, both outward and inward, is larger than that of Victoria or any of the other colonies. The returns, however, for 1886 do not show so much in favor of New South Wales as those of former years. In 1883 and 1884 the latter country had an advantage of Victoria of about 1,000,000 tons per annum, but in 1886 the advantage was only 266,560 tons; moreover Victoria increased her shipping from 1,631,266 tons in 1885 to 1,848,058 tons in 1886. New South Wales increased hers from 2,088,307 to 2,114,618, a gain of only 26,311 tons against 216,792 tons for Victoria.

Number of vessels and tonnage inwards and outwards for each of the colonies for 1886.

Colony.	Inwards.		Outwards.		Total shipping.	
	Number.	Tonnage.	Number.	Tonnage.	Number.	Tonnage.
New South Wales	2,684	2,114,618	2,755	2,143,986	5,439	4,258,604
Victoria	2,307	1,848,058	2,324	1,937,329	4,631	3,785,387
Queensland	918	557,026	977	563,453	1,895	1,120,479
South Australia	859	770,922	878	787,554	1,737	1,558,476
Western Australia	287	260,286	255	237,222	542	497,508
Tasmania	690	348,656	715	348,773	1,405	692,429
New Zealand	725	509,572	707	486,331	1,432	990,903
Total	8,470	6,397,138	8,611	6,456,648	17,081	12,853,786

Total tonnage of vessels entered at and cleared from each of the Australasian colonies for each year from 1877 to 1886, inclusive.

Colony.	1877.	1878.	1879.	1880.	1881.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*
New South Wales	2,237,981	2,459,504	2,540,724	2,482,779	2,786,500
Victoria	1,874,985	1,913,427	1,940,222	2,179,899	2,411,902
Queensland	956,844	1,066,758	1,256,394	1,255,576	1,533,808
*South Australia	672,776	906,273	932,891	1,200,904	1,269,491
Western Australia	151,133	162,753	170,057	250,429	285,046
Tasmania	319,517	315,844	381,895	413,308	383,762
New Zealand	789,177	884,963	949,692	819,716	833,621
Total	7,002,413	7,709,552	8,171,855	8,552,606	9,504,130

Colony.	1882.	1883.	1884.	1885.	1886.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*
New South Wales	3,296,665	4,006,237	4,660,958	4,133,077	4,258,604
Victoria	2,690,884	2,964,331	3,151,567	3,266,158	3,785,387
Queensland	1,890,591	882,491	1,152,112	1,029,181	1,120,479
*South Australia	1,337,218	1,504,765	1,834,532	1,807,042	1,558,476
Western Australia	344,247	389,102	442,886	468,085	497,508
Tasmania	417,418	471,122	614,198	667,806	692,429
New Zealand	899,836	1,002,491	1,063,430	1,032,700	990,903
Total	10,866,859	11,220,539	12,919,703	12,397,999	12,853,786

AGRICULTURE.

In agriculture Victoria takes the lead of New South Wales. In wheat alone during the year 1887 Victoria produced 12,100,036 bushels to 5,868,844 bushels for New South Wales. In oats Victoria produced 4,256,079 bushels to 600,892 bushels for New South Wales. The latter colony, however, was the largest producer of corn or maize, the figures being 3,825,146 bushels to only 231,447 bushels for Victoria. The latter colony was ahead in the production of hay, barley, and potatoes. The total number of acres under cultivation in New South Wales was only 977,664, whilst that of Victoria was 2,141,291. If New South Wales is behind Victoria in agriculture it is because the farmers have found it more profitable to devote their attention to the production of wool. The land, however, in New South Wales is quite as fertile as that of Victoria, and the average produce per acre is larger than in Victoria, or indeed any of the other colonies in the group with the exception of New Zealand. It should also be remembered that New South Wales is paying more attention than formerly to agriculture, and that last year she increased her area under crop from 868,093 acres to 977,664, and more than doubled her production of wheat.

Area under cultivation, and the produce of the principal crops in each of the Australasian colonies for the year 1887.

Colony.	Grain crops.							
	Wheat.		Maize.		Oats.		Barley.	
	Area.	Produce.	Area.	Produce.	Area.	Produce.	Area.	Produce.
	Acres.	*Bushels.*	*Acres.*	*Bushels.*	*Acres.*	*Bushels.*	*Acres.*	*Bushels.*
New South Wales	337,730	5,868,844	146,957	3,825,146	23,947	600,892	6,079	132,949
Victoria	1,052,685	12,100,086	4,901	231,447	185,765	4,256,079	37,081	827,852
Queensland	6,787	21,221	75,566	1,709,673	188	1,438	768	18,483
South Australia	1,942,453	(§)	.....	.....	7,264	(§)	15,697	(§)
Western Australia	24,043	288,516	171	2,137	1,766	28,512	5,185	82,816
Tasmania	35,322	632,573	.....	.....	21,607	560,622	2,749	61,585
New Zealand	253,025	6,297,638	4,720	.....	387,228	11,973,295	21,535	558,606

Colony.	Hay.		Potatoes.		Grape-vines.		Sugar-cane.		Total area under crop (area under grass not included).
	Area.	Produce.	Area.	Produce.	Area.	Wine produced.	Area.	Sugar manufactured.	
	Acres.	*Tons.*	*Acres.*	*Tons.*	*Acres.*	*Gallons.*	*Acres.*	*Tons.*	*Acres.*
New South Wales	223,470	349,808	17,322	45,808	5,840	*601,897	†15,117	13,750	†977,664
Victoria	445,150	483,049	49,974	170,661	10,310	(‡)	.....	.....	2,141,291
Queensland	39,280	75,371	7,202	26,967	1,517	‖147,410	54,010	58,545	221,843
South Australia	308,429	(§)	5,666	(§)	4,590	(§)	.....	.....	2,762,273
Western Australia	25,718	25,718	356	1,071	649	.....	.....	.....	84,403
Tasmania	47,269	50,158	16,084	75,773	.....	.....	.....	.....	152,388
New Zealand	57,938	79,013	27,683	134,965	.....	.....	.....	.....	1,372,219

NOTE.—Statistics of agriculture are collected in the various colonies in the months of February and March. The figures given are for those months of 1887.

* Also 1,945 tons of grapes for table use.
† Unproductive cane included.
‡ Not returned.
‖ Also 655 tons of grapes for table use.
§ No agricultural statistics were collected in South Australia in 1886 and 1887. The areas given are for the year ended March, 1885.

LIVE STOCK.

About four-fifths of the export wealth of Australasia consists of pastoral products, and the favorable condition of this trade is shown in the number of stock. We find that sheep in Australasia for the year ended March 31, 1887, numbered 86,352,020 against 82,169,364 for 1886. In spite of the decline in the price of wool the graziers continued to increase the number of their stock, the average increase for the year being a little more than 5 per cent. New South Wales in this industry is far ahead of all the other colonies, having nearly one-half the total number of sheep in the group; the figures being 39,169,304, against 10,700,403 for Victoria, 9,690,445 for Queensland, 6,696,406 for South Australia, 1,809,071 for Western Australia, 1,608,946 for Tasmania, and 16,677,445 for New Zealand.

The returns for sheep show an increase for New South Wales of 1,348,398 over the preceding year, and as compared with the number at the end of 1877 the returns show an increase of 13,899,547. The total clip of wool for 1886 in New South Wales exceeds that of 1885 by 5,138,222 pounds. The quantity of wool produced in New South Wales does not show in the returns, as no inconsiderable proportion is sent to other colonies and is mistaken for the produce of those colonies. Out of the total 1,702,233,471 pounds clip Melbourne received 37,199,377 pounds; Adelaide, 14,562,009 pounds; Brisbane, 155,134 pounds, and Sydney 118,316,151 pounds. The subjoined interesting and valuable table was furnished me by Mr. Alexander Bruce, chief inspector of stock for New South Wales:

Number of each kind of sheep in New South Wales at the close of March, 1887.

Kind.	Rams.	Ewes.	Wethers.	Lambs.	Total.
(1) MERINO.					
Combing.					
Superfine:					
Pure and stud	41,223	613,915	144,018	145,459	944,618
Ordinary	108,735	2,289,751	1,430,715	1,312,012	5,141,213
Total					6,085,831
Medium:					
Pure and stud	64,403	844,117	369,755	443,322	1,721,657
Ordinary	159,485	4,847,472	3,304,493	2,378,227	10,689,677
Total					12,411,334
Strong:					
Pure and stud	78,292	668,084	354,194	356,204	1,476,724
Ordinary	84,141	3,310,312	2,429,052	2,118,453	7,941,958
Total					9,418,682
Total combing					27,915,847
Clothing.					
Superfine:					
Pure and stud	9,658	143,308	62,167	79,444	316,590
Ordinary	42,104	497,188	358,674	219,538	1,112,459
Total					1,429,079
Medium:					
Pure and stud	25,716	258,102	157,775	118,423	560,016
Ordinary	124,708	2,198,484	1,436,558	1 137,960	4,897,725
Total					5,457,741
Strong:					
Pure and stud	62,805	280,370	135,160	140,778	619,113
Ordinary	40,735	1,069,898	1,025,332	509,729	2,645,694
Total					3,264,807
Total clothing					10,151,627
Total number of Merino sheep					38,067,474
(2) LONG-WOOLED SHEEP.					
Lincoln:					
Pure and stud	2,838	31,514	23,401	21,685	79,438
Ordinary	3,184	67,638	40,664	31,045	142,526
Total					221,964
Leicester:					
Pure and stud	1,967	27,841	21,695	12,988	63,961
Ordinary	1,903	20,951	17,092	15,683	55,629
Total					119,590
Downs:					
Pure and stud	413	3,307	957	2,000	6,677
Ordinary	1,260	7,285	7,712	3,710	19,967
Total					26,644
Romney Marsh:					
Pure and stud	10	100	154	19	283
Ordinary	498	4,466	3,715	1,293	9,902
Total					10,185
Total long-wooled sheep					378,383
(3) CROSSES.					
Crosses of the above breeds (long-wooled) with Merino principally	3,180	301,116	249,865	169,286	723,447
Total crosses					723,447
Grand total					39,169,304

The only sheep imported into New South Wales were from the other colonies; importations from England and the United States being prohibited. Amongst the long-wooled sheep the Lincolns gave the best return in wool and in weight of mutton, the cross-bred sheep being second. The general average of the lambing for the whole of the colony of the paddocked sheep is returned by the inspectors at 65⅔ per cent., and shepherded sheep at 61¾. In thirty-three districts the lambing was high; in ten districts, ordinary; in eleven districts, low, and in three districts, very low. The reason given for the high percentage is the favorable season; sheep not harassed by dogs; while the ordinary and low percentages are attributed to the drought in the early part of the year. Ewes weak and not able to rear lambs, owing to scarcity of water and feed, followed by too much rain, and losses by dogs and eagle-hawks. The paddocked sheep have a higher percentage than the shepherded sheep by 4$\frac{5}{11}$ per cent.

The total number of horned cattle in Australasia at the end of 1886 was 8,264,778, about one-half of which, 4,071.563, are in Queensland; New South Wales having only 1,367,844 and Victoria 1,303,265. For a number of years cattle raising was an unprofitable industry in New South Wales, and the number declined from year to year. In 1886, however, the colony exhibited an increase of 50,000 head over the number of the previous year. Out of the total number of cattle in New South Wales, 1,367,844, it is estimated that there were:

	Number.
Pure-bred and short-horns	34,819
Ordinary	526,099
Total	560,918
Herefords:	
Pure and stud	15,430
Ordinary	151,801
Total	167,231
Devon:	
Pure and stud	5,699
Ordinary	43,188
Total	48,887
Black-polled:	
Pure and stud	368
Ordinary	719
Total	1,087
Ayrshire:	
Pure and stud	942
Ordinary	2,595
Total	3,537
Alderneys:	
Pure and stud	298
Ordinary	175
Total	473
Crosses:	
First crosses	3,485
Ordinary	582,276
Total	585,761

The crosses are estimated as follows:

	Number.
Short-horn and Hereford	220,463
Short-horn and Devon	75,618
Hereford and Devon	34,533
Short-horn and Black-polled	2,560
Ayrshire and Short-horn	4,000

The balance, 248,247, being unrecognizable.

Mr Bruce, in a recent report, after expressing indebtedness to me for securing for the government of New South Wales certain information in regard to the cattle trade of the United States, complains bitterly of the ill usage and starvation to which cattle are subjected in New South Wales, and strongly recommends that the cattle should be killed near the pastures and the meat sent to market by rail. He says:

When we see, from information obtained through Consul Griffin, that fresh meat is now regularly carried at all seasons of the year from the States in the far West to the Eastern sea-board, and when we know that some 2,000 bodies of beef chilled (not frozen), are regularly sent every week 1,000 miles from Chicago to New York or Boston by rail, thence by steamer across the Atlantic, over 3,000 more, to Liverpool, and thence by rail to London, there to be sold in such condition that the consumers who purchase it do not know but they are being served with Scotch beef, it is ridiculous to assert, as some of those in the live-stock trade in Sydney do, that we can not kill our fat stock at Bourke and send the meat down safely for sale in Sydney, seeing that the meat from there can be delivered in Sydney in twenty-six hours, while it must take at least ten or twelve days before meat from Chicago can be delivered in London. Then, as to the cost of conveying the cattle, alive and dead, to market, it is found, as was supposed, that fully one-third more bodies of beef can be carried on the train in the same space than live cattle; so that, taking the charge for the conveyance of a bullock to Sydney at 25*s.* ($6.07), the current rate for live stock under the fresh-meat trade (as four more bodies of beef can be put in a truck than live cattle), there would be a saving in cost of freight of, say, £5 ($24.33) on the truck load. This would of course far more than cover the cost of ice (in America, with the temperature at from 90° to 110° in the shade.) The ice for the same distance costs 2*d.* (4 cents) per body, and other necessary expenses incurred in carrying out the fresh-meat system. In fact, it is believed that there would be a direct saving of 15*s.* ($3.65) a head by killing and chilling cattle at Bourke instead of sending them down alive, while at the same time the following other highly-important advantages would accrue from the adoption of a fresh-meat trade:

(1) The terrible ill usage and cruelty to which the live stock are now subjected would to a very large extent be prevented. Fat stock, trucked at Bourke, or even 100 miles nearer Sydney, are, on an average, six or seven days at least without food.

(2) All the flavor and nutriment of the meat would be preserved.

(3) The heavy shrinkage in the weight of the stock which occurs through this treatment would be saved.

(4) The railway department, by being able to make use of the meat vans for all kinds of back loading, would save tens of thousands a year now spent in hauling empty sheep and cattle trucks back up the country, as there are very few sorts of ordinary loading which can be put into these trucks. Whatever trouble may be taken to clean them, the smell of the stock can never be got rid of.

The number of horses in the whole of Australasia increased from 1,302,160 head in 1885 to 1,372,756 head in 1886. In New South Wales the number advanced from 344,697 to 361,663 head; an increase of about 5 per cent.

The number of pigs in the whole of the group increased from 959,942 in 1885 to 1,143,966 in 1886; an increase of 19 per cent.

Live stock in Australasian colonies for the years 1871, 1881, *and* 1886.

Colony.	1871.				
	Sheep.	Cattle.	Horses.	Pigs.	Total.
New South Wales	16,278,697	2,014,868	304,100	213,193	18,810,878
Victoria	10,002,881	799,509	181,643	177,447	11,160,980
Queensland	7,408,334	1,168,235	91,910	32,707	8,696,186
South Australia	4,412,055	143,463	78,125	95,542	4,729,185
Western Australia	670,999	49,593	22,098	14,265	757,555
Tasmania	1,305,489	101,540	23,054	52,863	1,482,946
New Zealand	9,700,629	436,592	81,028	151,460	10,369,709
Total	49,778,584	4,713,890	782,558	737,477	56,007,439

Colony.	1881.				
	Sheep.	Cattle.	Horses.	Pigs.	Total.
New South Wales	36,591,946	2,597,348	396,577	213,916	39,801,787
Victoria	10,267,235	1,286,677	278,195	239,926	12,072,063
Queensland	8,222,883	3,618,513	194,217	56,438	12,162,051
South Australia	6,810,856	314,918	159,678	120,718	7,406,170
Western Australia	1,267,912	63,009	31,755	22,530	1,385,206
Tasmania	1,847,479	130,536	27,805	49,660	2,055,470
New Zealand	12,985,085	696,687	161,736	200,033	14,045,541
Total	78,063,426	8,709,628	1,251,963	903,271	88,928,288

Colony.	1886.*				
	Sheep.	Cattle.	Horses.	Pigs.	Total.
New South Wales	39,169,304	1,367,844	361,663	209,576	41,108,387
Victoria	10,700,403	1,308,265	308,553	240,957	12,553,178
Queensland	9,690,445	4,071,563	278,694	61,861	14,102,563
South Australia	†6,696,406	†389,736	†168,420	†163,807	†7,418,359
Western Australia	1,809,071	88,254	38,360	24,655	1,960,340
Tasmania	1,608,946	148,665	29,684	73,118	1,860,413
New Zealand	16,677,445	895,461	187,382	369,992	18,130,280
Total	86,352,020	8,264,778	1,372,756	1,143,966	97,133,520

* Year ended 31st March, 1887.
† Information not collected for 1886 or 1887. The figures inserted are those for the year ended March, 1885.

PUBLIC DEBT.

The public debt of the Australasian colonies at the end of 1886 was about $766,049,990, the largest debt being that of New South Wales. The enormous debt was incurred principally in the construction of railways and other public works.

Growth of the debt of each of the colonies for each year from 1877 *to* 1886 *inclusive.*

Colony.	1877.	1878.	1879.	1880.	1881.
New South Wales	£11,794,419	£11,688,119	£14,937,419	£14,903,919	£16,924,019
Victoria*	17,018,918	17,022,065	20,050,953	20,060,740	23,426,502
Queensland	7,685,350	8,935,350	10,192,150	12,192,150	13,245,150
South Australia	4,737,200	5,329,600	6,605,750	9,865,500	11,196,800
Western Australia	161,000	184,556	361,000	361,000	511,000
Tasmania	1,589,705	1,747,400	1,943,700	1,943,700	2,008,000
New Zealand†	20,691,111	22,608,311	28,583,231	28,583,231	29,659,111
Total	63,607,698	67,515,401	87,910,249	87,910,249	95,965,582

Growth of debt of each of the colonies, etc.—Continued.

Colony.	1882.	1883.	1884.	1885.	1886.
New South Wales	£16,721,219	£24,632,459	£30,101,959	£35,564,259	£41,084,249
Victoria*	22,108,202	24,308,175	27,526,667	28,628,588	30,114,208
Queensland	13,125,350	14,907,850	16,419,850	19,320,850	20,320,850
South Australia	12,472,600	13,891,900	15,473,800	17,020,900	18,340,200
Western Australia	511,000	611,000	765,000	1,268,100	1,286,000
Tasmania	2,050,600	2,385,600	3,202,300	3,357,000	4,026,720
New Zealand†	30,285,711	31,385,411	32,860,982	35,790,422	37,587,776
Total	'97,219,682	112,122,395	120,350,558	140,970,119	153,209,998

* Amounts outstanding on 30th of June each year. †Including debts of provincial governments.

REVENUE.

The revenue for the whole of the group in 1886 was $117,531,210. The greater portion of this was realized from the sale of lands. The revenue from the customs during the same period was $36,155,065.

Liabilities and assets of banks doing business in Australasia for each year from 1881 *to* 1886, *inclusive.*

Colony.	1881.		1882.		1883.	
	Liabilities.	Assets.	Liabilities.	Assets.	Liabilities.	Assets.
New South Wales	£22,394,816	£27,870,483	£25,089,802	£31,714,134	£26,154,560	£33,392,652
Victoria	22,902,017	27,173,809	25,496,805	31,248,586	25,856,709	31,742,507
Queensland	5,448,047	7,056,182	6,600,572	9,133,039	7,494,705	10,310,640
South Australia	5,555,593	8,414,743	5,776,666	10,812,498	5,806,594	11,868,084
Western Australia	364,584	556,618	484,347	715,343	604,463	872,329
Tasmania	2,755,768	2,716,026	3,097,319	2,989,928	3,735,242	3,512,618
New Zealand	10,088,189	14,863,645	10,015,274	17,162,285	9,706,700	17,794,761
Total	69,508,514	88,651,501	76,560,375	103,775,763	78,858,973	109,493,531

Colony.	1884.		1885.		1886.	
	Liabilities.	Assets.	Liabilities.	Assets.	Liabilities.	Assets.
New South Wales	£28,851,239	£36,835,195	£29,667,296	£38,143,488	£31,385,887	£41,122,097
Victoria	30,186,336	36,018,866	32,517,640	39,174,120	33,085,989	41,170,969
Queensland	7,662,542	11,155,423	9,085,592	13,527,826	7,889,167	14,525,409
South Australia	5,553,160	11,546,827	6,504,793	12,390,722	5,474,663	11,446,883
Western Australia	686,598	1,039,751	823,010	1,250,327	1,023,308	1,609,468
Tasmania	4,208,863	3,966,376	3,814,632	3,754,226	4,335,722	4,239,884
New Zealand	10,691,599	18,442,139	11,130,244	18,811,566	11,608,194	19,041,827
Total	87,840,337	119,024,577	93,563,207	127,042,220	94,787,930	133,166,557

RAILWAYS.

There were 8,891 miles of railways open in Australia at the close of the year 1886, of which New South Wales had 1,935 and Victoria 1,753.

Railways open in each of the colonies from 1877 *to* 1886, *inclusive of that under construction for* 1886.

Colony.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	Under construction, 1886.
	Miles.	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*	*Miles.*
New South Wales....	643	733	736	849	1,001	1,313	1,365	1,668	1,777	1,935	267
Victoria.....	950	1,052	1,125	1,199	1,247	1,355	1,562	1,668	1,680	1,753	316
Queensland	357	428	508	633	800	867	1,038	1,207	1,434	1,555	637
South Australia.....	328	454	559	667	832	945	996	1,059	1,063	1,382	417
Western Australia ...	68	68	72	72	92	95	95	118	124	154	46
Tasmania	172	167	167	167	167	167	167	215	257	308	188
New Zealand.....	954	1,070	1,171	1,258	1,287	1,465	1,480	1,570	1,613	1,809	171
Total.....	3,472	3,972	4,338	4,845	5,426	6,207	6,703	7,495	7,948	8,891	1,992

POST-OFFICE AND TELEGRAPH RETURNS.

The following table shows the number of post-offices, number of letters received and dispatched, number of newspapers, telegrams, and miles of wire in operation in each of the colonies at the close of 1886:

Colony.	Post-offices.			Electric telegraphs.		
	Offices.	Letters received and dispatched.	Newspapers and packets received and dispatched.	Stations.	Miles of wire in operation.	Telegrams received and dispatched.
New South Wales.....	1,157	42,849,900	34,881,200	425	20,797	2,661,126
Victoria.....	1,429	32,500,000	18,250,000	420	10,111	1,938,049
Queensland	662	10,508,345	9,391,614	282	14,443	1,201,495
South Australia.....	568	13,129,921	6,672,013	200	10,310	.....
Western Australia	80	1,847,694	1,300,708	38	2,658	315,197
Tasmania	251	4,109,220	3,806,738	144	2,353	214,738
New Zealand.....	1,089	39,518,479	17,791,706	375	11,178	1,886,266

It will be seen that New South Wales takes the lead in all these returns, the number of letters received and sent being 42,849,900 against 32,500,000 for Victoria. The number of newspapers received and sent by New South Wales was nearly double that of Victoria. New South Wales also takes the lead in the number of telegrams received and sent, the figures being: New South Wales, 2,661,126; Victoria, 1,938,049.

G. W. GRIFFIN,
Consul.

UNITED STATES CONSULATE,
Sydney, October 31, 1887.

GOVERNMENT LIFE INSURANCE IN NEW ZEALAND.

REPORT OF CONSUL CAMPBELL, OF AUCKLAND.

The government of New Zealand has a life-insurance department, which has been in operation for about eighteen years. In view of the vast business of life insurance the rise and progress of this department become a matter of importance, and present many interesting features. It was organized by an act of parliament in 1869, which became a law without opposition. An amending act was passed in 1870, and in 1874 another law was passed consolidating previous statutes and generally providing for the expansion and effective working of the business. Mr. D. M. Luckie, the commissioner of insurance, says in his report that the table of premiums was not at first calculated with a view to profits, but merely at such low rates as to secure safety to the policy-holders, the main object being to provide an inviolable guaranty to the assured. But, notwithstanding the low premiums, it soon became manifest that profits on the business would ultimately accrue, and a law was enacted for the division of the surplus to the holders of policies.

The history of the department has fully demonstrated that the business is safe and profitable. The first valuation made in June, 1875, showed a surplus cash profit of £12,191, and although the result was considered eminently satisfactory, it was thought the act of prudence not to declare a division of the profits. In 1880, five years later, a second valuation showed a nice surplus of £73,671 for that year, and of the accumulated profits £56,000 were divided, being equivalent, according to Mr. Luckie, of £124,552 of reversionary bonuses. A third valuation has yielded still more satisfactory results.

THE HISTORY OF THE DEPARTMENT.

In order to show the results of experiments made and the further history of the department, the following extract from the annual report of the government insurance commissioner, made July 30, 1887, is given:

For some time prior to the year 1884 there was entertained an opinion that it was desirable to establish the department as a corporate association. In that year an act was passed incorporating the office and placing it as an association in charge of a body of ten directors, partly appointed by statute, partly nominated by the governor, and partly elected by the policy-holders. After a brief experience of this arrangement parliament deemed it undesirable to continue the institution as then constituted, and in the session of 1886 passed an act repealing the association act, abolishing the corporation, and re-establishing the office on the basis of a government department. Under this latest act a board was constituted for the purpose of managing and controlling investments upon mortgage of freehold lands. The provisions for lending a portion of the office funds on such security was one of the principal features of the association act. This provision is continued by the new act now in force.

The board of investment numbers six members, comprising the colonial treasurer, the solicitor-general, the surveyor-general, the property-tax commissioner, the public trustee, and the government insurance commissioner. All loans on mortgage are limited in amount to not more than one-half of the actual value of the property to be mortgaged, as the same may be determined by valuators appointed by the board. No loan on mortgage is granted for any sum beyond £5,000.

The act further provides that not less than one-half of the moneys standing at the credit of the government insurance account shall be invested in securities of

the government of the colony or upon loans to local authorities, such as counties, boroughs, etc., constituted under act of parliament. All such loans must be secured by special fixed rate leviable on the ratable value of property within the town or country district. Considerable sums have been so invested.

THE PROGRESS OF THE BUSINESS.

The business has steadily grown in volume since the organization of the department. It should be remembered that hardly eighteen years have passed since the law was first enacted, and when it is considered that the population is less than 600,000 and that the field was occupied by well-known and aggressive companies, the progress has been exceedingly flattering. The growth of the business, the steady increase of the annual revenue, and the equally steady increase in the amount of the accumulated funds, are shown in the following table, which embraces the whole period of the department's existence:

Period.	Policies issued.	Sums assured.	Annual revenue.	Increase in funds.	Total funds.
Period ended 30th June, 1871	468	£206,361			£5,045
Year ended 30th June—					
1872	1,357	461,310	£18,101	£10,011	15,056
1873	1,157	428,615	31,491	21,746	36,802
1874	1,499	510,010	45,735	30,303	67,105
1875	1,374	453,223	63,614	42,863	109,968
1876	1,249	481,170	78,934	43,749	153,717
1877	1,411	564,228	91,995	65,677	219,394
1878	1,994	681,109	111,202	73,129	292,523
1879	2,073	687,574	132,622	79,367	371,890
1880	2,266	722,554	146,205	87,446	459,336
1881	1,790	550,351	156,616	97,895	557,231
1882	2,522	702,909	171,316	96,659	653,890
Half year ended 31st December, 1882	2,547	631,279	189,578	50,999	704,889
Year ended 31st December—					
1883	5,113	1,089,916	215,550	141,271	846,160
1884	3,309	800,016	228,434	126,616	972,776
1885	4,379	859,770	240,777	129,259	1,102,035
1886	3,560	717,464	255,603	129,899	1,231,934

THE ASSETS OF THE DEPARTMENT.

It is a part of the business of all life-insurance companies to keep their funds invested in paying securities or constantly at interest. The income thus derived enables them to pay dividends to their policy-holders and to increase their surplus. A large portion of the funds of this insurance department is invested in government securities, railway, county, and other government debentures, and on mortgages. The following table will show the assets and liabilities on December 31, 1886.

ASSETS.

	£	s.	d.
Loans on policies	148,853	14	10
Government securities	559,100	0	0
Railway debentures (guarantied by government)	40,000	0	0
Railway debentures	35,000	0	0
Municipal corporation debentures	67,572	0	0
County securities	1,000	0	0
Otago University debentures	15,000	0	0
Harbor board debentures	10,000	0	0
Landed and house property	87,132	15	3
Office furniture (head office and agencies)	2,452	2	11

ASSETS—continued.	£	s.	d.
Mortgages on property	209,480	0	0
Overdue premiums on policies in force £9,815 0 8			
Outstanding premiums due in December, 1886 ..... 16,787 7 8			
	26,602	8	4
Interest outstanding 2,754 16 0			
Interest accrued not due 11,678 11 10			
	14,433	7	10
Agents' balances	1,601	5	6
Temporary advance to industrial branch	130	8	8
Sundry accounts owing	1,441	8	10
Cash on current account	33,892	4	0
Total	1,253,191	6	2

LIABILITIES.

Total assurance, annuity, and endowment funds (as per revenue account)	1,231,983	16	10
Claims announced not paid	8,257	12	0
Surrenders	2	8	1
Annuities	87	11	9
Commission (new)	339	0	11
Medical fees	685	13	0
Postage	250	0	0
Premium deposits	1,668	2	7
Mortgages on property taken over by the association not yet paid	10,000	0	0
Valuation fee deposits	22	1	0
Total	1,253,191	6	2

LIFE-ASSURANCE COMPANIES.

There were eight life-insurance companies doing business in New Zealand in 1886, exclusive of the life-insurance department of the government.

The aggregate number of policies issued in the colony during the year by all these companies and the government insurance department was 9,152, representing an aggregate amount insured of £2,303,682. Of these 2,401 policies, representing £717,500, were taken out in the Australian Mutual Provident Society, and 3,456 policies, representing £713,882, in the government insurance department. The average value of each policy taken out during the year was £252. The average value of each in the Australian Mutual Provident Society was £299; in the whole of the other companies, £265, and the average value in the government insurance department was £207. The gross amount insured by policies taken out in the colony and existing at the end of 1886 was £13,472,341, of which the policies in the government insurance department represented £6,670,742, the balance being distributed to other companies.

REVENUE.

The total revenue on New Zealand life-assurance business during the year was £533,205, of which £56,025 accrued from new premiums and £348,279 from renewals. The interest credited to revenue amounted to £123,598. The government insurance department received the largest revenue, amounting to £193,037.

EXPENDITURE.

The total expenditure during the year in respect of New Zealand business amounted to £276,039, of which the claims paid amounted

to £109,777 and the payments for surrenders to £40,353. The largest amount, both for claims and surrenders, was paid by the government insurance department; the total expenses of all being £115,652, being at the average rate of 21.69 per cent. on the year's revenue (including interest). The rate of expenses varied greatly. The following were the several proportions for the year 1886:

Companies.	Revenue.	Expenses.	Proportion.
Australian Mutual Life	£198,086	£26,267	13.66
Colonial Mutual Life	13,629	10,936	80.26
Equitable Insurance of New Zealand	1,870	1,494	79.89
Equitable Life of New York	20,317	8,741	43.02
Mutual Assurance of Victoria	10,290	6,722	65.33
Mutual Life of Australasia	20,341	9,278	45.61
New Zealand government life insurance department	255,608	44,044	17.23

The New York Life Insurance Company of the United States of America has a fine and growing business in this colony, but I am unable to give any figures of that company.

In those societies which have not been long in operation in the colony, and in which the business is yet of a limited character, the expenses would necessarily bear an abnormally high proportion to the revenue.

THE DEATH-RATE.

The Australasian colonies have the reputation of being healthy, and it is certain that the death-rate, on an average, is low. New Zealand is well situated, and enjoys climatic advantages which make it a remarkably healthy country. The tables of mortality show a death-rate below any of the Australasian colonies, and, it is confidently believed, below that of any country in the world. It is certain, all things considered, that the establishing of the government insurance department by the legislature was wise and timely. Its successful management during the few years of its existence commends the institution to all thoughtful persons, and that it will grow in strength and power and be the means of accomplishing great good to the people no one familiar with the benefits of life insurance will ever question.

Death-rate of the population in the countries named.

Countries.	Death-rate per 1,000.	Countries.	Death-rate per 1,000.
Queensland	19.58	South Australia	12.48
Western Australia	17.61	New Zealand	10.61
New South Wales	16.02	England and Wales	19.00
Tasmania	15.40	German Empire	25.07
Victoria	14.73	France	22.00

There are many reasons for governmental institutions in New Zealand that do not exist in other countries. The colony is situated in the South Seas, a long distance from the civilized countries of the world, is a new country, with a comparatively small population, and convenience and self-interest tend to the building up of home industries. The railroads and telegraphs belong to and are run by the

government, and a postal savings-bank is maintained in connection with the post-office department.

RATES FOR INSURANCE.

The premiums in the government insurance department are rather below those of private companies, and are paid annually, semi-annually, quarterly, and generally in all respects as in private companies. The policies are likewise the same as in private companies. It is not necessary to give tables of rates in full. A synopsis is sufficient for a comparison.

Premiums (with participation in profits) payable annually during life to secure £100, payable at death.

Age nearest birthday.	Annual.			Half yearly.			Quarterly.		
	£	s.	d.	£	s.	d.	£	s.	d.
15	1	11	1	0	15	9	0	7	11
20	1	15	2	0	17	10	0	9	0
25	1	19	1	0	19	10	0	10	0
30	2	4	3	1	4	5	0	11	4
40	2	11	11	1	9	11	0	15	1
60	6	12	0	3	7	7	1	14	3

A TEMPERANCE SECTION.

About four years ago a temperance section was introduced into the department by act of parliament. Under this provision all who were total abstainers were given the option of being transferred to this class, and no others were permitted to share the profits of the section; the theory of the provision being that a smaller amount of sickness and a lower death-rate existed among people who totally abstained from the use of intoxicating spirits than those who did not. Quite a number have availed themselves of this provision, but the time has been too short to give statistics.

WHY THE DEPARTMENT WAS ORGANIZED.

The subject of life insurance addresses itself to all persons who wish to provide for the future. Confidence in the stability of life-insurance societies is absolutely necessary for their success. The failure of a number of such institutions in the Old World doubtless led to the establishing of this department by the government. Its growth and prosperity demonstrate the wisdom of the act bringing it into existence. It will surely be the means of enabling the people to have safe and reliable insurance at home, and affords a safe repository for funds that otherwise would leave these shores for other lands. As a government institution it is an innovation upon the established order of things, and is an experiment in organized society worthy of the observation of statesmen.

JNO. TYLER CAMPBELL,
Consul.

UNITED STATES CONSULATE,
Auckland, December 1, 1887.

CHANGES IN THE ARGENTINE TARIFF—REPEAL OF ALL EXPORT DUTIES.

REPORT OF CONSUL BAKER.

The Congress of the Argentine Republic, just adjourned, has made a number of important changes in the tariff for 1888. The most considerable of these is the total repeal of all duties on exports from the country, thus making a difference of 4 per cent. on wools, sheepskins, ostrich-feathers, and pelts; and a difference of 3 per cent. on animal oils, horns, bones, and bone-ash, hair, hide cuttings, tallow, and hides, in favor of the shipper.

To meet the loss to the revenue from this repeal, the rate of duty has been raised on a number of imported articles. For instance, the duty on cigars, which before was 55 per cent., is now raised to 60 per cent.; that on tobacco, which before was 50 per cent., is raised to 55 per cent.; that on arms and munitions, powder, and perfumery, which before was 45 per cent., is raised to 50 per cent.; while all kinds of groceries, comestibles, etc., with the exception of rice, farina, and table salt, which before paid a duty of 25 per cent., must now pay 30 per cent. Besides this the specific duty on refined sugar, which before was 7 cents per kilo, is raised to 9 cents per kilo, while the duties on all kinds of wines, liquors, etc., is increased from 22 to 25 cents per liter.

The following is a translation of the new tariff, which takes effect on the 1st of January next:

ARTICLE 1. All merchandise imported from abroad for consumption shall pay a duty of 25 per cent. on its valuation in deposit, except as follows:

(1) Cigars of all kinds, and snuff, shall pay a duty of 60 per cent.

(2) Tobacco of all kinds, which shall pay a duty of 55 per cent.

(3) Arms and munitions, powder, and perfumery, which shall pay a duty of 50 per cent.

(4) Ready-made clothing, confections in general, hats and caps, boots and shoes, saddles and harness, carriages, furniture, matches, other than of wax; fire-crackers, yuba-mate, and objects of art, which shall pay a duty of 45 per cent.

(5) Groceries and comestibles in general, except rice, farina, and table salt, which shall pay a duty of 30 per cent.

(6) Iron, ungalvanized, in sheets, bars, ingots, etc., white pine, spruce, printing and writing paper, which shall pay a duty of 10 per cent.

(7) Canvas and sack-cloth, jewelry, gold and silver worked, sewing and embroidery silk, all implements or instruments with handles, or adorned with silver and gold, when these increase its value one-third; presses, and all materials for printing, except types, lithographic presses, all agricultural and industrial machinery, coarse salt, steam-engines, and detached pieces of machinery for repairs, threads and wire on spools, sulphuric acid, and sulphate of lime, which shall pay a duty of 5 per cent.

(8) Precious stones unset, which shall pay a duty of 2 per cent.

(9) The following specific duties, to wit:

Wheat, for each 100 kilograms	$1.65
Starch, for each kilogram	.05
Coffee, for each kilogram	.08
Macaroni, for each kilogram	.07
Crackers and biscuits, for each kilogram	.09
Wheat flour and corn meal, for each kilogram	.04
Hominy, for each kilogram	.04
Tea, for each kilogram	.30
Sugar, unrefined	.07
Sugar, refined	.09

Common wine, in casks, per liter	$0.08
Fine wine, in casks, per liter	.25
Wine, bottled, for each bottle	.25
Beer and cider, bottled, for each bottle	.15
Alcohol, in casks, not exceeding 30°, per liter	.15
Brandy, gin, anise, etc., not exceeding 25°, per liter	.20
Alcohol, bottled, not exceeding 25°, per bottle	.20
Brandy, gin, anise, etc., not exceeding 25°, per bottle	.25
Liquors, bitters, sirups, etc., per bottle	.25
Kerosene, per liter	.05
Stearine and paraffine candles, per kilogram	.12
Playing cards, per gross	10.00
Wax-matches, per kilogram	.50
Straw-paper bags and wrapping paper, per kilogram	.10

All articles of weight which have two or more wrappings shall, if they pay a specific duty, include the immediate covering.

ART. 2. The following articles shall be free of import duty: Works of art, original paintings and sculpture, books in general, vessels and machinery for vessels, no matter how propelled; stone-coal, plows, wire for fencing and telegraphs, blood animals and live stock, fresh fish, fresh fruit, furniture and tools of immigrants; silver and gold, coined, in powder, or in bars; plants, railway and tramway materials, locomotives, car-wheels, iron pipes for gas and water, of at least 75 millimeters diameter; quicksilver, sand and gravel, shooks and cask frames of more than two kilograms, special mining powder and drilling-machines, church ornaments or for purposes of religious worship, sulphur, books and school stationery at request of boards of education, seeds for agriculture, specifics for curing sheep-scab, wooden casks, materials for preparing meats for export, and all articles excepted by special laws.

ART. 3. The exportation of all products, produce, or manufactures of the country shall be free of duty.

By a supplemental law there is a duty of 1 per cent. additional to the rates above specified on all imported articles.

I understand that the tariff of valuations is also undergoing revision, and for the coming year will show some changes in the official values put upon imports.

E. L. BAKER,
Consul.

CONSULATE OF THE UNITED STATES,
Buenos Ayres, November 29, 1887.

TREATY BETWEEN GERMANY AND GUATEMALA.

REPORT OF MINISTER HALL.

The United States has no commercial treaty with Guatemala, that of 1849, which had hitherto been satisfactory to both Governments, having been abruptly terminated by Guatemala in 1873. Since that time its Government has manifested no inclination either to renew it or to enter into a new treaty. The German minister has been engaged in negotiating a commercial treaty between Germany and Guatemala. I have been favored with a loan of the draught of the treaty, from which I have made the accompanying translation.

The treaty was negotiated in 1876, and is the subject of Mr. Williamson's dispatches to Mr. Evarts—No. 607, of the 14th of April, and No. 723, of the 25th of November, 1877. In the former he gives a synopsis of a similar treaty between Germany and Costa Rica. It is styled a treaty of friendship, commerce, and navigation, and a consular convention. It has now been concluded, signed, and ratified,

on the 8th instant, by the constituent assembly without, as I understand, any material amendment or alteration of the original of 1876.

I respectfully invite the Department's attention to this important treaty. It contains stipulations which are not to be found in any treaty of the United States with any power. Practically, all of its advantages are on the side of Germany.

HENRY C. HALL.

LEGATION OF THE UNITED STATES IN CENTRAL AMERICA,
Guatemala, November 19, 1887.

Treaty of friendship, commerce, navigation, and consular convention between the Republic of Guatemala and the German Empire.

ARTICLE 1. There shall be peace and perpetual friendship between the States of the German Empire of the one part and the Republic of Guatemala of the other part, and between the citizens of both parties without exception of persons or places.

ART. 2. There shall be reciprocally complete and entire liberty of commerce between all the territories of the German States and all the territories of the Republic of Guatemala. The citizens of the high contracting parties may freely and with all security go with their vessels and cargoes to all the places, ports, and rivers of Guatemala and of Germany where navigation is now permitted or where it may hereafter be permitted for the vessels of any nation or state. Guatemalans in Germany and Germans in Guatemala shall enjoy in this respect the same liberty and security that native citizens enjoy.

ART. 3. The citizens of each one of the high contracting parties may reciprocally enter into with full liberty any part of the respective territories, reside therein, travel, trade by wholesale as well as by retail, lease, purchase, and own the lands, warehouses, and shops they may require, make shipments of merchandise and of the precious metals, either in bars or in coin, receive consignments from the interior and from foreign countries without in any case being subject to other taxes, general or local, nor to other imposts or dues of any kind than those which are established or may hereafter be established for native citizens.

They shall have entire liberty to transact business by themselves, to present at the custom-houses their own declarations, or to be aided or represented by whomsoever they may appoint, whether as attorneys, factors, agents, consignees, interpreters, or any others, whether for purchasing or for selling their properties, effects, or merchandise, or for the loading, discharging, or clearance of their vessels.

They shall have the right to discharge the commissions that may be confided to them by their countrymen, by foreigners, or by natives, in the capacity of attorneys, factors, agents, consignees, or interpreters, by themselves or with others, and in no case shall they be subject to other taxes or imposts than those to which native citizens are or may hereafter be subject.

They shall enjoy a like privilege, in all their purchases and sales, for fixing the price of their effects, merchandise, and other objects whatsoever, whether imported or destined for exportation. It is understood that in all this they shall conform to the laws and regulations of the country.

ART. 4. Each one of the high contracting parties binds itself not to grant within its own states any monopolies, exemptions or privileges, so called, to the prejudice of the commerce of the citizens and flag of the other. The provisions of this article are not to be applied to those articles, the trade in which belongs exclusively to the two respective governments, nor to patents of invention, their introduction and application, nor to the privileges conceded by virtue of legalized contracts.

ART. 5. The citizens of both contracting parties shall enjoy in the two countries a complete and constant protection for their persons and properties. They shall have free access to all the tribunals of justice to demand and to defend their rights; to this end they may employ under whatever circumstances the advocates, procurateurs, and agents of every kind which they themselves may designate.

They shall have the right to be present at the resolutions and sentences of the tribunals in the causes in which they are interested, the same as at the examinations and declarations of witnesses that may take place at the trials or at judgments, whenever the laws of the respective countries permit the publicity of those acts.

In this respect they shall otherwise enjoy the same rights and privileges that natives enjoy and be subject to the same conditions to which they may be subject.

ART. 6. Guatemalans in Germany and Germans in Guatemala shall be exempt from all personal service in the military forces on land and on sea and in the national guards and militias; from the obligations to accept the duties of political, administrative, and judicial offices; from all extraordinary war taxes, from forced loans, military requisitions, or services whatever they may be. In all other cases they shall not be subject on account of their property, personal or real, to other charges, extortions, and imposts than may or might be exacted of natives or of the citizens or subjects of the most favored nation.

ART. 7. The vessels, cargoes, merchandise, and goods of the citizens of the two countries, respectively, shall not be subjected to any embargo nor be detained for any military expedition whatsoever, nor for any public use without the interested parties having previously agreed to and fixed upon, through experts or otherwise, a just and sufficient compensation in each case for all the prejudices, losses, demurrages, and damages caused by the service or to which they may be subjected or which may result therefrom.

ART. 8. Guatemalans residing in Germany and Germans residing in Guatemala shall enjoy complete liberty of conscience and worship, and their respective Governments shall not permit them to be molested on account of their religious belief, nor on account of the exercise of their religion in private houses, in chapels, churches, or places of devotion designated; therefore, with the decorum due the Divinity and respect for the laws, usages, and customs of the country, Guatemalans and Germans shall have liberty to bury their respective compatriots who die in Germany or in Guatemala in such places designated and established by themselves that the parents or friends of the deceased may select, and the funerals conducted in accordance with the rules of their church shall not be molested, nor their sepulchers violated nor destroyed for any motive.

ART. 9. The marriage of a Guatemalan shall be held valid in Germany, and the marriage of a German shall be held valid in Guatemala, without regard to religious confession, if such marriage has been contracted in the form prescribed in the country wherein celebrated, or before the diplomatic or consular representative of the nation of one of the parties accredited to and authorized by the Government to perform those services.

ART. 10. The citizens of each of the contracting parties shall have the right to acquire and to own in the respective territories of the other all kinds of personal property and real estate and the liberty to work them, as also to dispose of them, as may be expedient, by sale, donation, permutation, will, or any other manner. Equally the citizens of one country who may be the heirs of property situated in the other country shall succeed to without impediment such part of the property belonging to him whether by will or by abintestate, with the right to dispose of them at his discretion, save the payment of the same dues upon sales, successions, or other imposts that natives would pay in like cases.

In the event of the exportation of property acquired through any title by Guatemalans in Germany, or by Germans in Guatemala, there shall not be imposed on such property in either country any of the imposts known by the names of jusdetractus, gabelas heredetaria, census conigrationis, nor any other to which natives may or might not be subject.

ART. 11. The two high contracting parties, desiring to avoid the difficulties which may arise, agree that those shall be considered Guatemalans in Germany and Germans in Guatemala who, having removed for the purpose of residing therein to the states of the other party, shall have conserved their nationality in conformity with the national laws of the country of their nativity.

The children of Germans born in Guatemala, and the children of Guatemalans born in Germany, shall have a right upon arriving at their majority to elect the nationality of their father or of the country of their birth by a declaration made in authentic form, of which the declarant shall present a certified copy to the respective consul and to the local authority.

The high contracting parties agree that the children of Germans born in Guatemala, and *vice versa*, may be exempted from military service (the said children of Germans in Guatemala and of Guatemalans in Germany) until they reach their majority, according to the laws of the country of their birth.

ART. 12. If (which God forbid) the peace between the two high contracting parties should become altered, the citizens of the one party that may be in the territory of the other shall be permitted to remain in it and to continue in the exercise of their occupations or vocations without being molested in any manner, and especially without there being imposed on them any impost, contribution, or extraordinary loan to which the citizens of the country are not subject, and they shall be guaran-

tied in the enjoyment of their liberty, their goods, their credits, and interests, so long as they do not disobey the laws of the country.

In case they should prefer to leave the country during a state of war, they shall be freely permitted to do so, and to this end to freely arrange their affairs and dispose of their credits, and to carry the proceeds with them without any deduction therefrom being made. In such case a safe-conduct shall be given them for embarking in the port they may of their own wish designate, unless it should be occupied or besieged by the enemy, and that their own safety or that of the state should not oppose that they should depart by such port, in which case they shall embark wherever and in such manner as may be possible.

ART. 13. In no case of war or collision between the two countries shall the respective citizens of the one or the other, their real estate, movables, semi-movables, credits and stocks of whatever kind, be subject to other charges or imposts than those which may or shall be exacted of natives.

ART. 14. Guatemalan merchants in Germany, and German merchants in Guatemala, shall enjoy for their commerce all the rights, liberties, and privileges conceded to, or that may be conceded to, the citizens or subjects of the most favored nation.

Consequently the duties or imposts imposed in Guatemala upon the products of the soil or of the industry of Germany, and in Germany upon the products of the soil or of the industry of Guatemala, shall be no other or higher than those to which the same products of the most favored nation may be subject. The same principle shall be observed for exportation. In the reciprocal commerce of the two countries there shall be no prohibition or restriction in the importation or exportation of any article if not equally extended to all other nations; and the formalities which may be required for proving the source and derivation imported into one of the two countries shall be equally applied to all other nations.

ART. 15. The vessels of each one of the parties which may arrive at the ports of the other party or depart therefrom shall not be subject to any higher charges for tonnage, light-house, port, pilotage, or quarantine dues, or others touching the vessel than those to which national vessels may, or shall be subjected.

The tonnage and other duties upon the capacity of vessels shall be collected in Guatemala from German vessels upon the German vessel's register, and reciprocally.

ART. 16. Objects of whatever nature imported into the ports of one of the two countries under the flag of the other, whatsoever may be their origin and from whatever country they may be imported, shall pay no higher duties upon their entry, nor shall they be subject to other charges than if imported under the national flag. Likewise the objects of whatever nature exported from one of the two countries under the flag of the other from any country whatsoever shall not be subjected to other duties or formalities than if exported under the national flag.

ART. 17. Guatemalan vessels in Germany and German vessels in Guatemala may discharge a part of their foreign cargoes in one port and the remainder in another port or other ports of the same country. They may also receive return cargo in part at different ports of the same country, paying in each port no other or higher duties than those that are paid or may be paid by national vessels under analogous circumstances.

In regard to the coast-line trade the citizens of both countries shall be treated like the citizens or subjects of the most favored nation.

ART. 18. Vessels belonging to the citizens of one of the high contracting parties that may be wrecked or stranded on the coasts of the other, or which may be compelled by stress of weather or damages proven to enter or touch at ports on the coasts of the other, shall not be subject to any navigation charges whatsoever, under whatever name they may be established, except such duties as under the same circumstances national vessels would be subject to.

In addition they shall be permitted, in order to avoid damage to the merchandise, to transship to other vessels, or to discharge and store the whole or part of the cargo; and no other charges shall be demanded than those relating to the expenses of discharging, rent of warehouses, and use of public ship-yards as may be necessary for depositing the merchandise and repairing damages.

Likewise every facility and protection shall be afforded them to that effect, as also that of procuring provisions and putting the vessel in a condition to continue her voyage.

ART. 19. All vessels that sail under their respective flags and that carry the patent (register) and other documents required by the legislation of the two countries to prove the nationality of merchant vessels shall be considered Guatemalan vessels in Germany and German vessels in Guatemala.

ART. 20. The vessels, merchandise, and effects belonging to their respective citizens which may be taken by pirates within the jurisdictional limits of one of the contracting parties, or on the high seas, and shall be brought into the ports, rivers,

roadsteads, or bays of the dominion of the other, or may be found therein, shall be delivered to the owners, they paying (should there be occasion therefor) the expenses of recovery that may be determined by competent tribunals, after right of ownership shall have been proven before said tribunals, by a claim that must be made by the parties interested or by their attorneys, or by the agents of the respective governments within the period of two years.

ART. 21. Vessels of war of either contracting party may enter, remain, obtain whatever they need, and make repairs in the ports of the other, as such access may be accorded to the most favored nation. They shall be subject to the same rules and enjoy the same privileges as those of the most favored nation.

ART. 22. If one of the contracting parties should be at war with a third power, the other shall in no case authorize its citizens to take or accept a commission or letter of marque to operate hostilely against the former nor to injure the commerce or the properties of its citizens.

ART. 23. The two high contracting parties adopt in their mutual relations the following principles:

(1) Privateering is and hereby remains abolished.

(2) The neutral flag covers the enemy's goods, with the exception of the contraband of war.

(3) The neutral merchandise, with the exception of contraband of war, cannot be taken under the enemy's flag.

(4) Blockades, in order to be binding must be effective—that is, maintained by a force sufficient to effectually prevent entrances into the territory of the enemy.

It is also agreed that the flag also secures the liberty of persons, and that individuals belonging to enemy's nationality found on board of a neutral vessel can not be made prisoners, unless of the military class and at the time in service of the enemy.

The two high contracting parties shall apply these principles in whatever concerns other powers, only to those which also recognize them.

ART. 24. In case that one of the contracting parties should be at war, and that its vessels should exercise the right of visit, it is agreed, that should they fall in with a vessel of the other party which shall have remained neutral, they shall remain out of range of cannon-shot and may send their boats with two officers only on board of the neutral vessel for the purpose of examining the papers concerning her nationality and cargo.

The commanders shall be responsible for whatever vexation or act of violence that they commit or permit to be committed.

It is agreed that in no case shall the neutral party be obliged to go on board of the visiting vessel to show his papers, or for any other purpose whatever.

The visit shall not be permitted except on board of vessels that sail without a convoy. It will be sufficient when they are convoyed that the commander should declare verbally and upon his word of honor that the vessels placed under his protection and the shelter of his force belong to the country whose flag they display, and that he should declare, when their vessels are bound to a port of the enemy, that they do not carry contraband of war.

ART. 25. In the event of one of the countries being at war with any other power, the citizens of the other country may continue their trade and navigation with the same power, except with the cities or ports that are actually besieged or effectively blockaded; that this liberty of trade and navigation in no case is understood to extend to articles reported to be contraband of war, to wit, fire arms, side-arms, projectiles, powder, saltpeter, military equipments, and all implements whatsoever destined for war purposes.

In no case can a merchant vessel belonging to citizens (of one or either the other) of the two countries, found to be cleared for a port blockaded by a force of the other, be captured and condemned unless a notification or signification of the existence of the blockade has been previously made to her by some vessel forming a part of the blockading force or division; and in order that a pretended ignorance of the facts may not be alleged, and that the vessel which has been duly notified is subject to capture if she should present herself before the same port while the blockade lasts, the commander of the vessel of war shall, on the first visit, note his *visa* on the papers of the vessel, stating the day, the place, or latitude and longitude, on and at the visit and notification aforesaid were made with the required formalities.

ART. 26. Each one of the high contracting parties may establish consuls in the territory and dominion of the other, but these agents shall not enter upon their duties, nor employ the rights, privileges, and immunities inherent to their office without having personally obtained the exequatur of the territorial government, the latter reserving the right to determine the residences in which it may be expedient to admit consuls. It is understood that in this respect the Governments, respectivley, shall place no restrictions that are not the same for all nations.

ART. 27. Consuls-general, consuls, vice-consuls, and consular agents, likewise consular pupils, shall enjoy in the two countries all the privileges, exemptions, and immunities that may be conceded to agents of the same rank of the most favored nation.

Consuls envoyes (consules missi), citizens of the country which appoints them, shall be exempt from quarterings and direct taxes whether personal, military, or sumptuary of the State or municipality.

But if such agents should be merchants, or exercising any industry, or should own real estate, they shall be considered in regard to taxes and contributions upon such industries or properties as citizens of the States to which they belong.

Consuls envoyes (consules missi), citizens of the contracting party that appoints them, shall enjoy the personal immunity, and shall not be arrested, nor taken to prison except for grave offenses. In regard to consuls who are citizens of the country of their residence, or merchants, the personal immunity is to be understood only as applicable to oaths or other civil causes that do not arise from the commerce that they are personally engaged in or through their dependents. Such agents may place over the outside door of their houses a coat of arms of their country with an inscription that says: "Consulate of ——— ———," and they may raise the flag of their country over the consular office, but these exterior designations never shall be considered as constituting the right of asylum. In case of the death, inability, or absence of the consul-general, consuls, vice-consuls, and consular agents, the consular pupils, cancilleres, and secretaries shall be admitted to the full right to discharge temporarily the business of the consulate.

ART. 28. The archives, and, in general, all the papers of the cancilleres of the respective consulates shall be inviolable, and shall not be taken nor searched by the legal authorities in no case, and under no pretext.

ART. 29. Consuls-general and consuls, respectively, shall have liberty to establish vice-consuls and consular agents in different cities, ports, and places of his consular district as the good of the service confided to him may require, but it is understood that this shall be with the approbation and the exequatur of the territorial government.

These agents may be appointed from the citizens of the two countries, or from foreigners.

ART. 30. Consuls-general, consuls, and vice-consuls or consular agents, respectively, may, upon the death of their countrymen who have died without making a will or designating their executors—

(1) To place their seals, either officially or at the request of the parties interested, upon the movable property and papers of the deceased, notifying in advance the proper local authority, so that, in the exercise of his jurisdictional right, he may be present, and if he deems it convenient to cross with his own seals those placed by the consul, these double seals can not be removed, except by common accord.

(2) To extend, also in accord with proper authority, the inventory of the succession.

(3) To proceed, according to the laws of the country, with the sale of the movable effects belonging to the estate when such movables may be subject to deterioration by the effects of time, or the consul may consider such sale expedient to the interests of the heirs of the deceased.

(4) Administer or liquidate personally or appoint, upon his own responsibility, and in accord with the local authority, one or more agents to administer and liquidate the estate.

Consuls shall announce the death of their countrymen in one of the newspapers published within his district, and he shall not deliver the estate and its products to the legitimate heirs or to their representatives until after having satisfied all the debts deceased may have contracted in the country, or until one year shall have elapsed from the publication of the death without any claim having been presented against the estate.

When there is no consul at the place of the domicile of the deceased the competent authority shall by themselves perform the same offices which in like cases would be performed with the property of natives of the country. They will give information as soon as possible of the decease to the consul or consular agent, and the final proceedings shall, in accord with the local authority, be carried out by such consul or consular agent from the moment he presents himself personally or by a delegate consul-general. Consuls and consular agents shall be considered as the guardians of the orphans and minors of their country, and in virtue of this title they shall all take such measures of preservation as the welfare of the persons and properties of such orphans and minors require; shall administer their estates, and shall fulfill all the duties of guardians under their responsibility and in conformity with the laws of the respective country.

ART. 31. Consuls-general, consuls, vice-consuls and consular agents only are charged with the duty of maintaining order on board of the merchant vessels of

their nation. They alone may settle disputes between the masters and crews, and especially disputes concerning wages and fulfillment of contracts. The local authorities shall interfere only in cases of disorder of such a nature as to disturb public tranquility on land or in the port, or when a person of the country, or who does not belong to the crew, may have taken part.

In all other cases the said authority shall limit their action to rendering their assistance to the consular authority if called for and deemed necessary for the arrest of a person inscribed on the crew, but in order having him detained previous to being taken on board.

In all that relates to the police of the ports, to the discharging and loading of the vessel, to the security of the merchandise, goods, and effects, the citizens of the two countries, respectively, shall be subject to the laws and statutes of the territory.

ART. 32. Consuls-general, consuls, vice-consuls, and consular agents, respectively, may have arrested and sent on board, or to their country, seamen who may have deserted the vessels of such country. To this effect they will apply in mutiny to the competent local authority, and shall prove by exhibition of the register of the vessel or the crew-roll, or by a copy of their papers duly certified by them, that the men claimed belong to the said crew. Upon this demand, thus authenticated, the delivery shall not be refused. In addition, all aid and assistance in search of, apprehension, and arrest of the said deserters, who shall be detained and kept in the prisons of the country, at the request and expense of the said agents, until these agents may find an opportuuity to deliver them to whomsoever it may concern, or send them to their country. Notwithstanding if such an opportunity should not present itself within three months from the date of the arrest the deserters shall be set at liberty and can not be again arrested for the same offense.

The high contracting parties agree that the seamen and other persons of the crew, citizens of the country in which the desertion may take place, shall be exempted from the stipulations of the present article.

ART. 33. Whenever it shall not be otherwise stipulated between owners, charterers, and, insurers, the damages that vessels of the two countries shall have experienced at sea en route for their respective ports shall be settled by the consuls-general, consuls, and vice-consuls, or consular agents of the country, unless the inhabitants of the country where said agents reside are interested in the average; in such case it shall be adjusted by the local authority, unless a previous agreement should be entered into by the parties.

ART. 34. Whenever any vessel belonging to the Government or citizens of one of the high contracting parties is wrecked on the coasts of the other, the local authorities shall inform the consul-general, consul, vice-consul, or consular agent of the district, or in the absence thereof, the nearest consul-general, consul, vice-consul, or consular agent to the place where the accident may have occurred.

All operations concerning the salvage of Guatemalan vessels that may have been wrecked or stranded in the territorial waters of Germany shall be made in accordance with the laws of the country, and reciprocally, all the operations relating to the salvage of German vessels that may be wrecked or stranded in the territorial waters of Guatemala, shall also be adjusted in conformity with the laws of the country.

The intervention of said consular agents shall take place in the two countries solely for the purpose of having a vigilance upon the operations relative to the repairs or victualling or sale, should it take place, of the wrecked or stranded vessel on the coast.

The intervention of the local authorities in any of these cases shall cause no costs of any kind, except the expenses, the operations of salvage, and preservation of the effects saved may give rise to, and to which national vessels, under similar circumstances, would be subject to.

The high contracting parties also agree that the merchandise saved shall be subject to no custom-house duties, unless admitted for interior consumption.

ART. 35. The high contracting parties agree to concede mutually in all matters relating to commerce, navigation, and to consuls the same rights and privileges now conceded, or which in future shall be conceded, to the most favored nation.

[This stipulation will be better understood in connection with the fact that the treaty was negotiated in 1876.]

ART. 36. In case that one of the contracting parties should conceive that the stipulations of the present treaty have been infringed, the party shall at once address an exposition of the facts, together with a demand for reparation accompanying the documents and the necessary proofs for establishing the legitimacy of the complaint, and no act of reprisal shall be authorized nor hostility committed until after the reparation asked forshall have been denied or submitted to arbitration.

ART. 37. The present treaty shall remain in force from the day of the exchange of ratifications until the 31st day of December, 1881, and if within twelve months before the expiration of that period neither of the two parties shall notify by means of an official declaration of its intention to terminate its effect it shall be binding for another year, and so on, successively, until one year shall have passed after the official declaration before mentioned.

ART. 38. The present treaty, comprising thirty-eight articles, shall be ratified, and the ratification shall be exchanged in Guatemala within the term of twelve months, or before if possible.

COMMERCE AND RAILWAYS OF NORTHERN MEXICO.

REPORT OF CONSUL-GENERAL SUTTON.

I have been enabled to obtain much information of value as to the volume and routes of trade into and out of Mexico. I could also compare the situation of to-day with that of nine years ago.

In those days, and even some years later, there was no American railway within hundreds of miles of the frontier. Now there are eight—International and Great Northern, of the Missouri Pacific system, and the Texas-Mexican (narrow guage), of the Mexican National Railroad, at Laredo, Tex.; Eagle Pass Branch, of the Southern Pacific system, at Eagle Pass; Galveston, Harrisburgh, and San Antonio; Southern Pacific, Texas Pacific and Atchison, Topeka and Santa Fé, at El Paso; and the New Mexico and Arizona, of the Santa Fé system, at Nogales.

Within a few years, at the least, some Texas railway company will build to the Lower Rio Grande at Brownsville, Edinburgh, or Rio Grande City.

It is reported that the Santa Fé has purchased the San Antonio and Aransas Pass system. This will be a good line to carry on to this lower river country, and, ultimately, to extend to Tampico, to connect with the Tampico, San Luis Potosi Branch of the Mexican Central.

A railway from San Diego, Cal., to Ensenada de Todos Santos, in Lower California, is only a matter of a year or two, and surveys for a railway in northeastern Lower California, to connect with the Southern Pacific system, have been lately made. I understand a concession for this latter line has already been obtained.

Only a few years ago Mexico's only railway was that from Vera Cruz to the capital—263 miles—and controlled by English capital.

There are now built and in operation—

	Miles.
Matamoros and Monterey (Mexican National concession)	75
Laredo to Saltillo (Northern Division Mexican National)	235
San Miguel to Mexico (Southern Division)	409
Morelia Division	95
El Salto Branch	50
*Mexican International, Huntington Southern Pacific line, Eagle Pass to Lerdo, on Mexican Central, about	350
Mexican Central, El Paso to Mexico	1,224
Sonora Railway Company (Limited) Nogales to Guaymas	265

These have all been built with American capital. The Mexican National is actively engaged in completing its line from Saltillo to

*This road is not yet finished but will be ready for through traffic this month or next.

San Miguel, some 400 miles. This will be nearly or quite through in 1888.

There are, besides, some short lines, and lines under construction enough to make about 200 miles more of road.

Not counting the 400 miles of the National now building, and the money for which has been secured, there are now in Mexico over 3,100 miles of railway. Of these all but about 350 miles have been built by American companies. About 1,000 miles of these American roads are narrow gauge. If we compute these 2,750 miles of standard and narrow-gauge lines at $30,000 per mile, the money thus invested by Americans in railways in Mexico within the last few years is shown to exceed $80,000,000.

None of these lines are, as yet, very profitable, but they are steadily gaining, and with a slight improvement in business and careful management will all become profitable investments.

Mexico has not yet enough roads. Another line from near Galveston to the lower river and thence, via Victoria, Tamaulipas, to the capital, would pay well.

All over Mexico times have been hard for the past three or four years. There have been extraordinary floods, droughts, etc., which do not often occur. A year of good crops, a rise in cattle or silver, or a slight improvement in all these would make a great difference.

All over Mexico the people are acquiring new wants, and buying more and more of foreign goods. They are exploiting all kinds of natural products, so as to decrease the balance of trade against them and to supply these new wants.

Improved agricultural implements are being imported and used more and more each year. All the larger cities have the telephone and the electric light. Coal has been found in several locations, particularly on the Huntington line in Coahuila; and founderies, smelters, and other manufactories are being established in various parts of northern Mexico.

Our cheap lumber from around New Orleans is being imported in increased amounts every year. Improved horses and neat cattle and sheep are being used to raise the grade, and much more care given them than formerly.

Any thing that has reasonable promise of profit is studied carefully and adopted with enthusiasm.

Altogether, the outlook is favorable for a steady growth and development, which will make as great changes in the next as have been made in the past few years.

One special change I note in the monetary affairs. Not many years ago—since 1878—New York exchange was not wanted, and in many localities not known. They wanted exchange on London or other European cities.

Now New York exchange is a highly-prized and much-sought commodity. Except on the extreme west coast, where San Francisco rules the commerce, New York exchange is more sold in northern Mexico than all other besides. Even in the capital New York exchange is only second or third in the volume of business done. In the last month the City of Mexico quotations were as follows: A Mexican dollar bought 37⅛*d.* at sixty days' sight in London; 3.9 francs at sixty days' sight, or 3⅛ francs at sight, in Paris; 74.8 cents in American money at sight in New York; 3⅛ marks at sixty days' sight, or 3.1 marks at sight, in Hamburg; 77 cents at sight in Spain, and 79.4 cents at sight in Havana.

Most of the more profitable mines in northern Mexico are owned in whole or in part by Americans. I presume the value of these investments is now not less than $20,000,000.

Many large ranchos and haciendas in this section are owned by Americans, the value of which can not be less than $5,000,000.

The commerce is mostly in the hands of the Germans, but there are some American dealers whose capital must be equal to $1,000,000.

The American telephone companies have a considerable capital invested.

The Cable Company, whose head office is in New York, is a most profitable investment, but does not extend into the northern portion of Mexico. There are a number of American companies exploiting guano deposits and old ore dumps and others manufacturing, though as yet in a small way. Some of these are quite valuable.

In Lower California the International Company have an immense grant, estimated at 17,000,000 acres of land, and a brisk town has been started at Ensenada de Todos Santos, some 100 miles south from San Diego, Cal. The "boom" in California property has extended below the boundary line, and Lower California is just awakening. The International Company is American, and is not only a great project, but promises to be very profitable. It is claimed that the California wine, fruit, and wheat belt extends far down the territory, and that sufficient water can be obtained to irrigate vast tracts now uncultivated.

I have studied with much interest the new and strange problem of American railways in Mexico. It is very curious to observe how the common people have learned to utilize and depend upon the new method of transport. Necessarily, the employés are mostly Americans, but I found many Mexicans as telegraph operators and agents. Some are conductors, and others are agents at large stations. I saw only one Mexican locomotive engineer. Most of the Mexicans thus employed have been educated in the United States and speak more or less English. Two words of the English language have taken a firm hold on the country—the "all aboard" of the train conductors. Generally the educated classes have adapted themselves to the new order with little or no friction. Some ludicrous stories are told of one or two rather fresh generals who undertook to run a railway train as autocratically as they would the soldiers they commanded. It is said that one drew his sword on the conductor because he would not leave a station until he got his telegraphic train orders.

These things, however, are only incidental, and these officers got so severe a handling from their own Government as to prevent their wishing to repeat the operation.

The laws of Mexico were not framed so as to give prompt trial to engineers and others who may chance to wound or kill a man on the track. At first the arbitrary arrest and long detention for such occurrences was a source of much trouble.

Many men have been imprisoned needlessly, and held in jail for months for such accidents. This trouble is now almost entirely done away with, and at the present writing I do not know of any American held in prison in Northern Mexico for any such charge.

Many engineers and other train men have a dread of running into Mexico for fear of some accident, which may cause their arrest and long detention. This, however, will, in a measure, wear away, leaving, perhaps, enough to make them rather more careful than in the United States.

My observation, not only on this, but on other trips, and during my long residence here, has fully convinced me that, with ordinary care, there need be no serious trouble in building and operating a railway here. More courteous manners—not a bad thing in themselves—and a reasonable consideration are all that is needed with well-disposed people. There are, of course, here, as in the United States, some who are not well disposed. These are treated with great rigor by the General Government, and generally the local authorities are coming to do the same.

Those enterprising bandits who, in the United States west of the Mississippi, cause the prudent traveler to think about his watch and money, are not encouraged across the line. While the train-robbing business has developed north of the Rio Grande into a formidable menace to travelers, express companies, and the United States mails, the Mexican Government, by a summary law, provides that they shall be stood up and shot. It is not understood that any innocent party has yet suffered here. This law has had such good effect that a railway train is as safe from such persons in Mexico as anywhere in the Western United States.

I have spoken of New York exchange. In many places exchange on New Orleans, San Antonio, Saint Louis, or Chicago, is largely sold. Years ago when the Mexican dealer wished cotton goods, or furniture, or anything in the long list of merchandise, he looked first to Europe. Some few American goods came overland from Saint Louis or San Antonio. A larger quantity came by water to this city, to Tampico, or Vera Cruz, and some from California to the Pacific Coast ports.

Now, except at a few interior cities to which the railways have not yet penetrated, this is all changed. In Monterey, Saltillo, Chihuahua, and other principal cities, merchants can now take their choice. In many classes of goods the Americans can compete on equal terms.

In all, there is the great advantage of shorter time. Thirty days' time will suffice to replenish the merchants' stock in any particular line of goods. If we can make as good goods for about the same money the trade is our own. Even in wines California is beginning to get a trade here, and in many unexpected branches we are gaining from day to day. This change is, of course, aided in all possible ways by the railways of the United States and Northern Mexico to make traffic.

More goods go across the border into Mexico now every year than the United States sent to Mexico by all methods ten years ago.

In 1873 we sent to Mexico, in all, $5,231,255 out of a total of $20,166,013 from all countries. Of this, only $522,168 (omitting $2,232,948 at Matamoros) went across the frontier.

For the present fiscal year the exports of American goods to Mexico will be, in round numbers, $10,000,000, of which much more than half will go via American railways to the border and thence by rail to interior points.

I have spoken of the hard times which for the past three or four years have so retarded this section. If, as appears probable, a change should occur, these imports may easily double to the great benefit of our mannfacturers and of the railways which will transport them.

WARNER P. SUTTON,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Matamoros, Mexico, December 30, 1887.

FIBERS OF SALVADOR.

REPORT OF CONSUL DU PRÉ.

Inquiries made by manufacturers of coffee-sacks, and by rope, cordage, and paper makers, and addressed to the consulate, are answered by the statement that each banana tree is 2½ to 3 feet in circumference at its base. Its tapering-fibrous body, without a branch, is from 10 to 15 feet in height. These fibers, separated by a thin pith, are of the length of the body of the tree, in which there are no joints. These fibers are used here, just as they are taken from the tree and dried, as shoe-strings and as cords for all purposes. The several threads constituting them are of silken fineness and infinitely separable. The natives use them in making "bridle-reins" and lariats for most recalcitrant mules. The raw material costs only transportation to the rope-walk. Each banana tree bears in the twelve months of its existence only one bunch of fruit, but from two to four or ten trees spring from the roots of the one that has fallen. The bunch of bananas is worth here 15 cents, and the dead tree nothing. A cordage factory or paper-mill or coffee-sack maker, were not the defunct banana trees numberless, would give for each dead tree ten times the value of the fruit it produced. Split, dried, and packed the bodies of banana trees might be shipped profitably to the United States; but labor is cheaper by two-thirds here, and it were wiser to bring the proper machinery for these manufactures to Salvador. For this end a special concession and exemption from customs charges might be secured.

Rope-walks here are discovered in unfrequented streets and suburban roads. The machinery consists of a crank attached to an upright board, with which a muchacho (native boy) twists the fibers of the banana or cactus. A man skilled in the rope-maker's art splices the fibers together, adding to the length and thickness of the revolving cord *ad libitum et ad infinitum.*

The stem of such banana leaf consists of toughest and finest threads, and these leaves, 2½ and 3 feet wide and 10 to 15 feet long, resting on the heads of native women are umbrellas in the rainy season in roofless market places and streets of cities of Salvador. These are the carpets on which they sit and beds on which they repose.

L. J. DU PRÉ,
Consul.

UNITED STATES CONSULATE,
San Salvador, C. A., October 15, 1887.

PRODUCTION OF SUGAR IN LAMBAYEQUE, PERU.

REPORT OF ACTING CONSUL LA POINT.

The production of sugar in this consular district may be calculated at 800,000 quintals per year.

The local charges are 5 per cent. on estimated gains, the adjustment of which is left to the discretion of a Government official,

"apoderado fiscal." Besides these are other small taxes, but insignificant in comparison with the volume of business done.

Export duties on sugar do not exist.

Import duties on foreign sugars are very heavy, being 13 soles, silver (a silver sol = 72.7 cents American), per 100 kilograms. No sugar is imported here, however.

The greatest part of the produce is exported to England and Chili.

From a report recently published by the custom-house authorities I take the following data of exports from this district during the year 1886:

	Kilograms.
England	11,975,383
Chili	13,558,149
Colombia	311,269
France	25,202
Germany	6,210
Ecuador	10,544
Total	25,886,707

Of export to Chili the greater part was shipped from here for transshipment in Caldera to the Straits steamers for England, and only about 15 per cent. of the whole remains in Chili.

ALFRED LA POINT,
Consul.

UNITED STATES CONSULATE,
Lambayeque, December 12, 1887.

SUGAR INTERESTS OF TALCAHUANO.

REPORT OF CONSUL VAN INGEN.

1. No sugar is produced near this place.
3. No export duty on Chilian sugar, and none exported.
4. Import duties on foreign sugars are, per Chilian tariff, as follows:

	Cents.
First classification, refined, pays duty per kilogram (nearly)	11.67½
Second classification, "Rosa Emilia" (80.434 per cent.), or ground white sugar, like Pernambuco (nearly)	9.39
Third classification, granulated (60.869 per cent.) (nearly)	7.10½
Fourth classification, granulated (45.652 per cent.) (nearly)	5.48
Fifth classification, Nos. 20, 19, 18, 17 (Dutch)	8.21½
Sixth classification, Nos. 16, 15, 14, 13, Dutch (58.695 per cent.)	6.86½
Seventh classification, Nos. 12, 11. 10, 9, Dutch (45.652 per cent.)	5.33
Eighth classification, Nos. 8, etc., Dutch (37.826 per cent.)	4.41½

Specific duty on sugar.

Refined sugar is first class, valued at 23 cents per kilogram. Duty is 35 per cent. paper, and charge for exchange or gold value. Add 45 per cent. to this product, which gives 11.67½ cents per kilogram.

5. Extent of sugar trade, or imports of sugars, in the year 1886, as per Chilian statistics, are as follows:

Whence imported.	Kilograms.	Value.
Refined sugar.		
France	189,140	$43,517
Germany	229,398	52,789
United States	2,798	642
England	25,352	5,839
Peru	1,732	320
Total	448,415	103,107
White and brown sugar.		
Peru	7,612	$1,388
England	14,457	2,669
United States	367	67
Germany	2,900	536
Total	25,336	4,660

Imports in the first six months of 1887.

Whence imported.	Kilograms.	Value.
Refined sugar.		
France	118,786	$27,412
Germany	150,194	35,645
United States	2,798	642
England	2,904	676
Peru	1,732	320
Total	276,409	64,695
White sugar.		
Peru	3,736	$676
Germany	2,900	536
United States	367	67
Total	7,003	1,279
Brown sugar.		
Peru	8,214	$1,369

There is a sugar refinery at Vina del Mar, near Valparaiso; no statistics obtainable.

In Parral a beet-sugar mill is at work; another at San Felipe, further north, all for beet sugar. In neighboring port of Penco, five miles east of Talcahuano, a sugar refinery and works are being built.

No statistics are obtainable from any of these—none being published.

JOHN F. VAN INGEN,
Consul.

UNITED STATES CONSULATE,
Talcahuano, November 23, 1887.

CUSTOMS TARIFF OF ECUADOR.

[Transmitted by Consul-General McGarr.]

List of the articles on which the import duties have been altered by the Ecuadorian Congress of 1887, *and the amount to be paid thereon from January,* 1888.

Names of articles.	Duty per kilo. gross weight Ecuadorian currency.	Equivalent duty per kilo. in U. S. currency.
Artificial flowers in bunches	$1.00	$0.75
Billiard-tables and their accessories	.10	.075
Copy-books for schools	.02	.015
Dye-woods	.02	.015
Earthen water-jars:		
Common	.05	.0375
Fine	.10	.075
Envelopes for letters	.10	.075
Eye-glasses of all descriptions	1.00	.75
Furniture of all kinds, of no matter what material or what kind of coverings	.10	.075
Gold and silk embroidered articles	1.00	.75
Hand pumps for water	.02	.015
Hats and caps	.50	.375
Iron pipings of 12-inch diameter that do not form part of any complete machinery imported, although they may be applicable to such, and to steam water-pumps	.10	.075
Iron tacks	.02	.015
Jewelry:		
False, of all kinds except gilt or plated	.50	.375
Gilt, plated, or metal	1.00	.75
Lumber of all kinds, dressed and undressed	.004	.00375
Marble or granite powder	.02	.015
Marble slabs that form part of furniture	.10	.075
Mineral waters, such as Vichy, etc.	.05	.0375
Mustard	.10	.075
Oil-cloths for floors, stairs, etc	.05	.0375
Pickles	.10	.075
Prepared ornaments for trimming dresses	1.00	.75
Rails for tramways and railroads	.10	.075
Rice	.01	.0075
Sago	.05	.0375
Salts of soda	.02	.015
Sand paper	.10	.075
Spangles	1.00	.75
Steel or iron cross-ties for rail or tramways	.02	.015
Sirups	.10	.075
Sulphur	.10	.075
Tapioca and other starches	.05	.0375
Tinsel or enamel	1.00	.75
Thread for sewing bags and sails	.10	.075
Trimmed hats and caps for ladies	1.00	.75

The following articles will not be classified as furniture, but as fine or common delft or glassware, according to the class to which they may belong: Buttons, candlesticks, chandeliers, false pearls, glass beads, inkstands, knobs, lamps, lamp-shades, and lanterns.

The special or municipal tax of 20 per cent. on the amount of import duties continues in force.

CONSULATE-GENERAL OF THE UNITED STATES,
Guayaquil, December 3, 1887.

MINING LEGISLATION OF VENEZUELA.

The following decree of the president of Venezuela is supplementary to and regulative of the latest mining law of Venezuela, transmitted to the Department of State and published on page 526 of No. 83 of consular reports for September, 1887.

WINFIELD S. BIRD,
United States Consul.

CONSULATE OF THE UNITED STATES,
Laguayra, December 20, 1887.

[Translation. From the Official Gazette.]

Decree regulative of the law of mines, passed by Congress May 30, 1887.

The President of the Republic, in use of the authority delegated to him in article 5 of the law of mines, approved by Congress May 30, 1887, and with the affirmative vote of the Federal Council, decrees:

TITLE I.

General rules.

ARTICLE 1. For the purposes of the law of mines, approved by the Federal Congress May 30, 1887, and of this decree, all lands will be considered as composed of two distinct parts, to wit:

(1) The soil that comprises the surface, as properly called, and also the depth ordinarily used for cultivation, for the foundation of buildings or for any other object other than mining;

(2) The subsoil that extends indefinitely in depth from the point where the soil terminates.

ART. 2. The soil can belong to the nation, or to private individuals. The right of private property in the soil can not be alienated, and the owner can enjoy it, except in cases provided for by the law and this decree, previous just indemnity having been made; but the subsoil is primarily the property of the nation, and the Federal Government that has the administration of this property can, according to circumstances and without any rules except convenience, abandon it to the public, gratuitously cede it to the owner of the soil, or alienate it by means of a canon to private parties and associations that desire it, in all cases subject to the provisions of this decree.

ART. 3. The substances mentioned in articles 2, 3, and 4 of the law of mines of May 30, 1887, are divided, on account of the mode of working them, into three classes of mines. The first comprises those substances that are on the surface and in the soil, and can be worked by uncovering them. The second embraces those that are found in the subsoil, and used to be worked by excavations or tunnels. The third comprehends those found in the depths of the seas and territorial waters.

ART. 4. Mines can only be worked by virtue of concessions granted by the Government in accordance with the terms of this decree, with the following exceptions:

(1) Marine salt, that is worked for account of the nation, and the lime of the islands of Lake Maracaibo and the Territory of Colon, that are subject to special rules:

(2) Slate, sandstone, grindstone, marble, granite, basalt, limestone, gypsum, earthy, clayish, and sandy substances, and, in general terms, all materials of construction, that the Government cedes to the proprietor of the soil to be used in the form and at the time when he may deem proper, without being subjected to the formalities and restrictions of this decree.

ART. 5. The individual or company that works any mine not comprehended in exception 2 of the foregoing article, without having previously acquired a title of concession through the formalities established in this decree, shall pay a fine of from 500 to 10,000 bolivars, at the discretion of the federal executive, forfeiting to the nation the substances worked and all the mining implements and machinery; and if the work has been prosecuted arbitrarily on lands belonging to private parties,

the trespasser will be also compelled to pay the owner for all damages and injuries he may have caused.

ART. 6. The titles of mining concessions will be provisional for two years and definite up to ninety-nine years.

ART. 7. After a definite title of mining concession has been granted, even to the owner of the soil, the mine constitutes a property distinct from the land, and will be regarded as free from any obligations that affect the property right in the soil.

ART. 8. Mortgages that affect mining property must be recorded in the register's office of the jurisdiction in which the mining property is situated; otherwise they will be of no legal validity.

ART. 9. The definite title to work a mine will not be conceded unless the discovery of the mine has been really made beforehand, and the party to whom the concession has been made shall prove it by the presentation of the provisional title mentioned in this decree or in some conclusive manner.

ART. 10. The definite title to work a mine only gives the right to the substance worked. The grantee will buy from the nation, according to the law of public lands, the soil needed for the special purposes of working, if the mine shall be located on the public lands; and if it is found on the land of private persons or lands previously conceded, and the owner may not wish to associate himself with the holder of the mining title, the latter will acquire by purchase, or any other legitimate title, the soil needed for the work, or indemnify the owner of the land according to law.

ART. 11. The law of expropriation is applicable to all cases where it is necessary to make use of private property for the working of mines according to the provisions of this decree.

ART. 12. If a mining property is pierced by the salient angle of another, the owner of the former, working a vein found on his property, has the right to pursue it across said angle to where it again enters his own property.

If a concession of the same legal nature is pierced by the salient angle of another of like kind, the owner of the former, working a vein found on his concession, has the right to pursue it across said angle to where it again enters his own concession.

ART. 13. Mining properties must be accurately marked with paths and posts at all the entering or salient angles of their limits.

TITLE II.

Of persons that may obtain concessions.

ART. 14. Every person capable of making contracts may apply for definite or provisional concessions.

ART. 15. National or foreign corporations having their domicil in Venezuela must be organized in accordance with the prescriptions of the code of commerce.

ART. 16. Companies that are not domiciled in Venezuela, wishing to obtain concessions directly or by transfer, must previously comply with the following formalities:

(1) Documents must be exhibited to the minister of Fomento showing that the company is organized according to the law of the country of their domicil;

(2) These documents must be recorded in the register of the tribunal of commerce and the office of the public register in the jurisdiction where the mines are found, said proceeding being previously authorized by official letter from the minister of Fomento;

(3) The documents thus registered must be published in full in the Official Gazette of the nation;

(4) An agent must be legally appointed, who shall reside in Venezuela, in order to represent them and respond to the obligations contracted or to be contracted in the country by said company.

ART. 17. Mining companies shall respond to all their obligations with their properties, rights, and stocks that they may have in Venezuela.

TITLE III.

Of subterranean mines.

ART. 18. The system of exploring and working known in Venezuela under the name of shafts can be used in future by all persons capable of contracting in working to discover underground mines without other restrictions than those imposed by this decree.

ART. 19. A shaft is defined to mean a form 10 meters square of indefinite depth.

ART. 20. Neither shafts, galleries, perforations, nor excavations can be opened in the course of a vein already discovered, nor within the space of 100 meters on

either side of it. Nor can such works be opened in the precincts of villages, public roads, buildings, aqueducts, reservoirs, plantations or gardens, whether public or private. This prohibition extends to the radius of 100 meters from all these objects.

ART. 21. Previous permission from the authorities or from the grantee is not necessary to begin the opening of shafts on the public or common lands, or on lands previously conceded with mining titles that are not being worked.

ART. 22. To begin these works on mining concessions that are being prospected, or on private lands, permission of the owner of the mine or of the private property must be obtained, and if such permission is refused the prospector will apply to the chief civil authority, who will concede it on the conditions prescribed in this and the twentieth article.

The prospector is obliged to fill up the excavations or perforations that he may make on abandoning them.

ART. 23. The discoverer of a vein or quarry of any of the materials workable according to law will apply in writing to the president of the state or the governor of the Territory announcing his discovery, with all the circumstances that attend it, and this functionary will note the day and hour when the announcement was made and will give a receipt to that effect to the party interested, expressing also the day and hour noted in the writing.

ART. 24. The governor of the territory will name, within three days, two experts who, together with the inspector of mines, or in lieu of him the chief civil authority of the place in which the mine has been discovered will proceed to verify the discovery and will report in writing:

(1) About the situation of the shaft, if, in their opinion, it accords with the conditions of this decree;

(2) If there is a vein or quarry, and what are its approximate dimensions;

(3) The course of the vein and its nature, of which they will send samples.

ART. 25. In view of this report the president of the state or governor of the territory will grant to the discoverer a provisional title of property in the vein or quarry, registering the same in a book kept for the purpose, and ordering the same to be published in the newspaper.

ART. 26. This title gives to the discoverer the following rights:

(1) If the discovery has been made on lands conceded by virtue of a former law, but not yet prospected, or on the land of a private person, the discoverer, in the absence of any agreement, will be entitled to the sixth part of all the profits of said vein or quarry: provided, always, that the owner of the land desires to contribute with his property to a partnership with the discoverer and with sufficient working capital; and in case that the owner of the land refuses to work the mine in this manner the discoverer can work it on his own account, indemnifying the owner of the surface land according to the law of expropriation;

(2) If the discovery has been made on a mining property that is being worked the discoverer will have no right to pretend that the owner of the mine that is being worked shall concede to him a part of his land, but he may oblige him to sell all his property or to buy the vein or quarry that he has discovered at a price agreed upon by experts;

(3) If the discovery has been made on public or common lands, the discoverer will have the sole right of property in the vein or quarry, and will be preferred in obtaining a property right in the public or common lands that he may need to supply himself with wood, water, and other articles for working.

ART. 27. When, in order to work, the proprietor of the land by special title or by concession arranges a partnership with the discoverer they will both apply to the federal executive with the provisional title of discovery, and will grant to them in exchange a definite title in which will be expressed the share that each one of them has according to agreement, and in the absence of any agreement, according to this decree, in the profits of the work.

ART. 28. Every provisional or definite title is transferable to any person capable of contracting, provided the same has not lapsed. The transfer must be made in public writing.

ART. 29. The president of the State or governor of the Territory will transmit to the ministry of fomento a copy of every provisional title expedited in conformity with this decree.

ART. 30. The definite title will be expedited by the president of the Republic and registered in the ministry of fomento, in a book kept for the purpose, and also in the office of the register in the jurisdiction in which the mine is located, and it will also be published in the Official Gazette.

ART. 31. When the definite title to a discovery made on the public lands is solicited and a concession of part of these lands is asked for, the formalities of the pub-

lic land law as to the portion needed for the work must be first complied with; and when the definite title to a discovery made on land conceded according to previous legislation or on the land of private persons is asked for because the grantee or proprietor has not formed a partnership with the discoverer, the latter will be obliged to pursue the legal process of expropriation of the land he may need, after the government decrees it, and to pay the indemnity awarded to the proprietor.

TITLE IV.

Of the discovery of mines on the surface or in the soil that may be mined above ground.

ART. 33. Any one who may discover a mine that may be worked above ground on the public or common lands has the right to ask for and obtain a provisional title according to article 25, for which purpose the president of the State or governor of the Territory will proceed in the form directed in articles 23 and 24.

Exception is made in the cases of gold in pockets or placers, which may be freely worked on the public or common lands. But if the working is done with permanent manufactories and machinery, special contracts must be made between the miner and the Federal Government.

ART. 33. The discoverer of mines on the surface or in the soil of lands previously conceded, or of lands of private persons will, in like manner, obtain a provisional title that will only give him the reversionary right to work the same, provided that the owner of the land may not do so in the term of one year. This concession will be made to him by the president of the State or governor of the Territory.

ART. 34. The provisional title hereinbefore mentioned gives to the discoverer the right to secure a definite title in the form prescribed in articles 30 and 31, provided always that the discovery has been made on public or common lands, or that the term given to the proprietor of the land may have expired and he may not have chosen to work the mine.

ART. 35. The discoverer who secures a definite title, according to the foregoing article, can not begin to work the mine without having first indemnified the proprietor of the land for the damage or depreciation done to his plantation, or without having secured the legal act of expropriation.

TITLE V.

Of the discovery of mines in the depths of the sea or territorial waters.

ART. 36. Any one who discovers mines of this class can give legal notice in the manner prescribed in the foregoing articles, and will have the right to secure a provisional or definite title as it may be set out in the claim.

Gold-bearing sands found in the beds of rivers may be freely worked without the formality of law.

TITLE VI.

Of mining imports.

ART. 37. The duty on batteries and pulverizing machinery, established by the law of May 23, 1885, is abolished after October 1, proximo.

ART. 38. The quarterly tax of 72 cents in American gold, per hectare or per mine, according to the nomenclature of the law of 1885–'87 is also abolished after October 1, proximo.

The abolition of the tax mentioned in this article will not apply to persons or companies that hold unexpired mining concessions granted according to former laws on public or common lands when they have not secured the ownership of the land.

ART. 39. After October 1 proximo persons or companies that work mines heretofore conceded, or by the terms of this decree, will pay a national tax of 1 per cent. on the gross value of the entire product.

(1) In the case of mines that are worked by special contract, they will pay the tax specified in said contract.

(2) The titles of mining concession sgranted under former laws are not considered as special contracts for the purposes of the foregoing paragraph.

ART. 40. The following are exempted from payment of the tax imposed by the preceding article: mines of silver, copper, iron, chromate of iron, lead, quicksilver, tin, zinc, asphalt, mineral coal, fossil woods, peats, mineral waters, materials of agriculture and sculpture, and the raw materials for ceramic industry.

ART. 41. This tax will be paid in cash and for the months as they expire, within the first fifteen days of the next month, in the office of collection established by the government in each State or Territory.

ART. 42. The owner, agent, or administrator of the mine will present at the office of collection a statement of the accounts of the value of the gross product of the mine for the month, as shown by the chemical assays and data that appear in the books of the company. This statement will be subscribed by the administrator, agent, or cashier of the company on oath to be in conformity with the records of said books.

ART. 43. If the collector finds that the prices of the substance mined are lowered, he will then and there proceed to name an expert on behalf of the office and one on behalf of the tax-payer, who, together with a third person previously selected by both, will fix the price in view of the product and the proofs presented; and their decision will be final; the payment of tax to be made upon the basis of this price.

If the experts can not agree on the nomination of a third party the judge of the locality will exercise such function.

ART. 44. Whenever the office of collection wishes to verify the accordance of the statement presented with the books of the mining company the owner, agent, or administrator shall present them at the office of collection or to an employé designated for the purpose by the office or the Government.

ART. 45. If there are found differences or inequalities in such verification that show bad faith, the subscriber will be responsible for falsehood and perjury, he will be delivered to the tribunal competent to prosecute him, and the company will also pay double the tax found due.

ART. 46. If, in the act of verification, it is found that no books have been kept according to law, the subscriber to the statement presented at the office of the collector will be proceeded against in the form prescribed in the foregoing article, and the mining company shall pay four times the sum it ought to pay, according to the valuation of experts to be appointed by the chief of the office of collection.

ART. 47. Mining companies shall keep the books required for their work in the form prescribed by the code of commerce.

ART. 48. The mines, with all their buildings, machines, and appurtenances shall respond to the payment of taxes.

ART. 49. If a mining company shall neglect to pay the tax prescribed by article 39 within the stated term, the collection will be legally enforced and the company will be responsible for the costs and charges, and ultimately will be sentenced to pay twice the amount.

TITLE VII.

Of the expiration of concessions.

ART. 50. The provisional title is limited to two years from the date of its execution if the definite title has not been applied for, and the latter title is limited to three years from the date of its execution unless the mine to which it refers has been worked.

When the grantee has had to obtain the permission of the owner of the land where the mine is situated or to pursue process for judgment of expropriation, the term of three years will begin to date from the day that permission has been obtained or judgment definitely pronounced in the cause of expropriation.

ART. 51. It is hereby understood that concessions, whether made gratuitously or for consideration, granted in pursuance of previous legislation and not having yet been worked, lapsed or will lapse at the period fixed by the decree of November 15, 1883, and by the law of mines of May 23, 1885, as the case may be. The declaration of such expiration pertains to the Federal Executive.

ART. 52. Concessions granted by virtue of previous legislation will be considered as lapsed if the owners have ceased or shall cease to pay the mining taxes for the period of six months. This declaration of expiration pertains to the tribunals of justice by the ordinary legal processes.

ART. 53. Every mine that has been prospected and has not been worked for the term of five years shall be regarded as abandoned by the owner.

ART. 54. All the concessions that have lapsed by virtue of former legislation, as well as mines abandoned or lapsed by the terms of this decree, revert to the possession of the nation and may be again conceded according to law.

ART. 55. The law of mines of May 23, 1885, is abolished from the date of the promulgation of this decree.

ART. 56. The minister of fomento is charged with the execution of this decree and to publish it to all whom it may concern.

Granted, signed by my hand, sealed and countersigned in the Federal Palace at Caracas August 3, 1887, year twenty-four of the law and twenty-nine of the Federation.

GUZMAN BLANCO.

Countersigned.

MARTIN J SANAVRIA,
Minister of Fomento.

SUGAR ANALYSIS IN BRITISH GUIANA.

[Transmitted by Consul Bunker.]

The following are the results of the analyses of the trial sugar-canes grown at the botanical gardens during the year. They were all second ratoons and ten to eleven months old:

CHIGAGA.

[Yellow cane. Length 2.44 meters. Internodes 8–15 centimeters. Diameter 4 centimeters. Weight 3.367 kilograms. Gave 65.4 per cent. juice by mill. Density of juice at 86° F. 1063 = 8.5° Bm. Juice contained per gallon 1.339 pounds sucrose, 0.185 pound glucose, 0.049 pound mineral matter, 0.074 pound organic matter.]

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	12.60	Sucrose	expressed juice.. 8.24 residual juice.... 2.62	10.86	
Glucose	1.74	Glucose	expressed juice.. 1.14 residual juice.... 0.55	1.69	
Organic matter	0.70	Mineral matter	expressed juice.. 0.30 residual juice.... 0.10 fiber 0.22	0.62	
Mineral matter	0.46	Fiber		10.42	
Water	84.50	Water, etc		76.41	
	100.00			100.00	

QUEENSLAND CREOLE.

[Purple cane. Length 2.585 meters. Internodes 10–15 centimeters. Diameter 3 centimeters. Weight 2.138 kilograms. Gave 68.4 per cent. juice of density at 84° F. 1073 = 9.8° Bm. Juice contained per gallon 1.727 pounds sucrose, 0.004 pound glucose, 0.062 pound mineral matter, and 0.106 pound organic matter.]

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	16.10	Sucrose	expressed juice . 11.01 residual juice.... 2.25	13.26	
Glucose	0.04	Glucose	expressed juice.. 0.03 residual juice.... 0.01	0.04	
Organic matter	0.99	Mineral matter	expressed juice.. 0.38 residual juice.... 0.14 fiber 0.15	0.67	
Mineral matter	.57	Fiber		10.90	
Water	82.30	Water, etc		75.13	
	100.00			100.00	

RAPPOE.

[Greenish yellow cane. Length 2.310 meters. Internodes 8–13 centimeters. Diameter 3.5 centimeters. Weight 2.137 kilograms. Gave 69. per cent. juice of density 1072 = 9.7° Bm. Juice contained per gallon 1.667 pounds sucrose, 0.062 pound glucose, 0.053 pound mineral matter, 0.093 pound organic matter.]

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	15.55	Sucrose	expressed juice.. 10.73 residual juice.... 2.30	13.03	
Glucose	0.58	Glucose	expressed juice.. 0.40 residual juice.... 0.15	0.55	
Organic matter	0.87	Mineral matter	expressed juice.. 0.34 residual juice.... 0.09 fiber 0.15	0.58	
Mineral matter	0.50	Fiber		10.47	
Water	82.50	Water, etc		75.37	
	100.00			100.00	

STRIPED SINGAPORE.

[Yellowish green cane with ill-defined purple stripes, Length 2.530 meters. Internodes 10-17 centimeters. Diameter 2.8 centimeters. Weight 2.393 kilograms. Gave 67.8 per cent. juice of density 1075 = 10.1° Bm. Juice contained per gallon 1.762 pounds sucrose, 0.020 pound glucose, 0.064 pound mineral matter, and 0.099 pound organic matter.]

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	16.39	Sucrose	expressed juice.. 11.11	13.91	
Glucose	0.19		residual juice.... 2.80		
Organic matter	0.93	Glucose	expressed juice.. 0.13	0.16	
Mineral matter	0.59		residual juice.... 0.03		
Water	81.90	Mineral matter	expressed juice.. 0.40	0.74	
			residual juice.... 0.19		
			fiber 0.15		
		Fiber		9.58	
		Water, etc		75.61	
	100.00			100.00	

MEERA.

[Purple cane. Length 3 meters. Internodes 8-17 centimeters. Diameter 3 centimeters. Weight 2.742 kilograms. Gave 68 per cent. juice of density 1066=8.9° Bm. Juice contained per gallon 1.495 pounds sucrose, 0.062 pound glucose, 0.055 pound mineral matter, and 0.104 pound organic matter.]

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	14.02	Sucrose	expressed juice.. 9.53	11.83	
Glucose	0.59		residual juice.... 2.30		
Organic matter	0.96	Glucose	expressed juice.. 0.40	0.54	
Mineral matter	0.51		residual juice.... 0.14		
Water	83.90	Mineral matter	expressed juice.. 0.35	0.72	
			residual juice.... 0.12		
			fiber 0.25		
		Fiber		9.90	
		Water, etc		77.01	
	100.00			100.00	

LAHAINA.

[Yellowish-green cane. Length 3.33 meters. Internodes 8-14 centimeters. Diameter 4.2 centimeters. Weight 3.736 kilograms. Gave 69.2 per cent. juice of density 1067=9° Bm. Juice contained per gallon 1.546 pounds sucrose, 0.062 pound glucose, 0.041 pound mineral matter, and 0.090 pound organic matter.]

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	14.49	Sucrose	expressed juice.. 10.03	11.93	
Glucose	0.58		residual juice.... 1.90		
Organic matter	0.85	Glucose	expressed juice.. 0.40	0.47	
Mineral matter	0.38		residual juice.... 0.07		
Water	83.70	Mineral matter	expressed juice.. 0.26	0.58	
			residual juice.... 0.18		
			fiber 0.14		
		Fiber		10.44	
		Water, etc		76.58	
	100.00			100.00	

HONOLULU.

[Greenish-yellow cane. Length 2.210 meters. Internodes 6-10 centimeters. Diameter 4.4 centimeters. Weight 2.761 kilograms. Gave 69.3 per cent. juice, density 1078=10.4° Bm. Juice contained per gallon 1.745 pounds sucrose, 0.033 pound glucose, 0.084 pound mineral matter, and 0.161 pound organic matter.]

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	16.19	Sucrose	expressed juice.. 11.22	13.59	
Glucose	0.33		residual juice.... 2.37		
Organic matter	1.50	Glucose	expressed juice.. 0.20	0.29	
Mineral matter	0.78		residual juice.... 0.09		
Water	81.20	Mineral matter	expressed juice.. 0.54	0.99	
			residual juice.... 0.28		
			fiber 0.17		
		Fiber		9.80	
		Water, etc		75.33	
	100.00			100.00	

"BARBADOS ELEPHANT."

[Greenish-yellow, with purple patches. Cane covered with waxy bloom. Length 2.077 meters. Internodes 8-10 centimeters. Diameter 4.7 centimeters. Weight 5.029 kilograms. Gave 77.8 per cent. juice of density 1065 = 8.8° Bm. Juice contained per gallon 1.40 pounds sucrose, 0.015 pound glucose, 0.039 pound mineral matter, and 0.084 pound organic matter.]

100 parts by weight contained—

Juice.	
Sucrose	13.14
Glucose	1.42
Organic matter	0.79
Mineral matter	0.55
Water	84.10
	100.00

Cane.			
Sucrose	expressed juice	10.22	11.00
	residual juice	0.78	
Glucose	expressed juice	1.11	1.21
	residual juice	0.10	
Mineral matter	expressed juice	0.43	0.75
	residual juice	0.12	
	fiber	0.20	
Fiber			8.08
Water, etc			79.01
			100.00

"PURPLE MAURITIUS."

[Nearly all purple cane. Length 2.084 meters. Internodes 9-13 centimeters. Diameter 3.5 centimeters. Weight 2.095 kilograms. Gave 73.5 per cent. of juice of density 1067 = 9° Bm. Juice contained per gallon 1.528 pounds sucrose, 0.035 pound glucose, 0.070 pound mineral matter, and 0.090 pound organic matter.]

100 parts by weight contained—

Juice.	
Sucrose	14.28
Glucose	0.52
Organic matter	0.84
Mineral matter	0.66
Water	83.70
	100.00

Cane.			
Sucrose	expressed juice	10.40	12.16
	residual juice	1.67	
Glucose	expressed juice	0.38	0.50
	residual juice	0.12	
Mineral matter	expressed juice	0.48	0.94
	residual juice	0.23	
	fiber	0.23	
Fiber			10.07
Water, etc			76.33
			100.00

"SELANGORE."

[Greenish-yellow cane, with few red patches. Length 2.325 meters. Internodes 8-11 centimeters Diameter 4.8 centimeters. Weight 3.314 kilograms. Gave 79.3 per cent. juice of density 1064 = 8.7° Bm. Juice contained per gallon 1.330 pounds sucrose, 0.125 pound glucose, 0.075 pound mineral matter, and 0.090 pound organic matter.]

100 parts by weight contained—

Juice.	
Sucrose	12.97
Glucose	1.17
Organic matter	0.85
Mineral matter	0.71
Water	84.30
	100.00

Cane.			
Sucrose	expressed juice	10.28	11.46
	residual juice	1.18	
Glucose	expressed juice	0.93	1.03
	residual juice	0.10	
Mineral matter	expressed juice	0.55	0.91
	residual juice	0.14	
	fiber	0.22	
Fiber			8.49
Water, etc			78.11
			100.00

"WHITE MAURITIUS."

[Pale greenish-yellow cane. Length 2.470 meters. Internodes 7-10 centimeters. Diameter 4.3 centimeters. Weight 2.941 kilograms. Gave 76.1 per cent. juice of density 1061 = 8.3° Bm. Juice contained per gallon 1.21 pounds sucrose, 0.178 pound glucose, 0.062 pound mineral matter, and 0.132 pound organic matter.]

100 parts by weight contained—

Juice.	
Sucrose	11.40
Glucose	1.68
Organic matter	1.24
Mineral matter	0.58
Water	85.10
	100.00

Cane.			
Sucrose	expressed juice	8.67	9.99
	residual juice	1.32	
Glucose	expressed juice	1.18	1.43
	residual juice	0.25	
Mineral matter	expressed juice	0.44	0.95
	residual juice	0.19	
	fiber	0.32	
Fiber			9.03
Water, etc			78.61
			100.00

KEENING.

[Light greenish-yellow cane with purple red patches. Length 2.165 meters. Internodes 9–13 centimeters. Diameter 3.2 centimeters. Weight 1.750 kilograms. Gave 76.9 per cent. of juice of density 1075 = 10° Bm. Juice contained per gallon 1.575 pounds sucrose, 0.088 pound glucose, 0.061 pound mineral matter, and 0.288 pound organic matter.]

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	14.65	Sucrose	expressed juice	11.26	12.66
Glucose	0.77		residual juice	1.40	
Organic matter	2.21	Glucose	expressed juice	0.59	0.69
Mineral matter	0.57		residual juice	0.10	
Water	81.80	Mineral matter	expressed juice	0.44	0.93
			residual juice	0.20	
			fiber	0.29	
		Fiber			8.97
		Water, etc			76.75
	100.00				100.00

To compare with the foregoing, the following analysis may be given of a sample of canes grown in the laboratory grounds without any particular attention. The cane selected was a very fine specimen in appearance. Topped for grinding it was 13 feet long, and weighed about 17½ pounds:

COLONY CANE.

[Plants twelve months old. Greenish-yellow. Length 3.910 meters. Internodes 9–15 centimeters. Diameter 5.4 centimeters. Weight 8.025 kilograms. Gave 78.8 per cent. of juice of density 1070 = 9.4° Bm. Juice contained per gallon 1.584 pounds sucrose, 0.094 pound glucose, 0.051 pound mineral matter, and 0.091 pound organic matter.

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	14.80	Sucrose	expressed juice	10.92	12.80
Glucose	0.88		residual juice	1.88	
Organic matter	0.85	Glucose	expressed juice	0.65	0.77
Mineral matter	0.47		residual juice	0.12	
Water	83.00	Mineral matter	expressed juice	0.35	0.52
			residual juice	0.06	
			fiber	0.12	
		Fiber			10.18
		Water, etc			75.72
	100.00				100.00

Samples of Lahaina canes that had been grown at Pln. Enmore were also analyzed. The canes proved to be richer in sugar than those grown at the botanical gardens (from whence the seed plants were obtained), as the following results show:

LAHAINA. (PLN. ENMORE.)

[Plants eleven months old. Yellow, with green and red patches. Length 1003 meters. Internodes 8–15 centimeters. Diameter 4 centimeters. Weight 2.446 kilograms. Gave 72.4 per cent. juice by mill of density 1076 = 10.2° Bm. Juice contained per gallon 1.782 pounds sucrose, 0.038 pound glucose, 0.066 pound mineral matter, and 0.094 pound organic matter.

100 parts by weight contained—

Juice.		*Cane.*			
Sucrose	16.56	Sucrose	expressed juice	11.99	13.68
Glucose	0.36		residual juice	1.69	
Organic matter	0.87	Glucose	expressed juice	0.26	0.32
Mineral matter	0.61		residual juice	0.06	
Water	81.60	Mineral matter	expressed juice	0.44	0.69
			residual juice	0.13	
			fiber	0.12	
		Fiber			10.38
		Water, etc			74.93
	100.00				100.00

From the above analyses it will be seen that none of the trial canes exhibits any peculiar features from a chemical point of view, or promises to supplant the ordinary cane. Grown under proper conditions, the common Otaheite or Bourbon cane yields abundance of juice containing as much as one-fifth of its weight of sugar, and it scarcely appears likely that any better cane for the colony will be found.

The principal facts of the preceding analyses are summarized in the following table:

Name.	Per cent. of crushing.	Total sugar in cane.	Total sugar extracted.	Total sugar in megass.	Per cent. fiber.	Density of juice Baumé.
Chicaga	65.4	12.55	9.38	3.17	10.42	8.5
Queensland Creole	68.4	13.30	11.04	2.26	10.90	9.8
Rappoe	69.0	13.58	11.13	2.45	10.47	9.7
Striped Singapore	67.8	14.07	11.24	2.83	9.58	10.1
Meera	68.0	12.37	9.93	2.44	9.90	8.9
Lahaina	69.2	12.40	10.43	1.92	10.44	9.0
Honolulu	69.3	13.88	11.42	2.46	9.80	10.4
Barbadoes Elephant	77.8	12.21	11.33	0.88	8.08	8.8
Purple Mauritus	73.5	12.16	10.37	1.79	10.07	9.0
Salangore	79.3	12.49	11.21	1.28	8.49	8.7
White Mauritus	76.1	11.42	9.35	1.57	9.02	8.3
Keening	76.9	14.35	12.85	1.50	8.97	10.0
Colony cane	73.8	13.57	11.57	2.00	10.18	9.4
Lahaina	72.4	14.00	12.25	1.75	10.38	10.2
Means	71.9	13.06	11.04	2.02	9.05	9.4

From the mean figures it will be seen that 71.9 per cent. extraction of juice from average cane containing 13.06 per cent. sugar, result in 11.04 per cent. of the total sugar being obtained, 2.02 per cent. remaining in the megass. Each unit of cane juice obtained by crushing therefore removes an average of 0.1585 per cent. of total sugar from such canes, and a proportionately larger or smaller quantity from the richer and poorer ones.

6. The following analysis of the expressed juice of leaves of mature cane may be interesting as showing the proportion of sugar present, and as being, as far as the reporter is aware, the first of the kind:—

Density 1030=4·2° Bm. 100 parts by weight contained—

Sucrose	3.18
Glucose	0.49
Ash	1.61
Organic matter	2.32
Water	92.40
	100.00

7. A fair amount of work was done during the year for merchants and others, chiefly in connection with the sugar industry. A rather large number of samples of sugar, molasses, etc., were submitted for polarization. To insure correct polarimetric readings, great pains have been taken, and numerous trial experiments made with the instruments and apparatus in use at the Government laboratory.

The polariscope principally used—now a well-tried instrument, of the Soleil-Ventzke-Scheibler pattern—was sent to the makers at Berlin to be put in thorough order. On its return a long series of trial experiments was made with it to again determine the accuracy of the principal divisions marked on its scale. For that purpose pure sugar was prepared by repeatedly crystallizing purified sugar candy from alcohol of 85 per cent., and submitting the resulting crystals to much further treatment in the way of powdering, washing with strong alcohol, and drying in air free from moisture for several weeks at the ordinary temperature. The object kept in view being to obtain the sugar free from any appreciable amount of moisture, mineral matter, or glucose; and particularly to guard against the accidental *inversion* of any portion of the sugar during the treatment.

Repeated experiments with the pure substance thus obtained proved the normal weight of sugar required to polarize 100 divisions on the laboratory instrument to be 26.126 grams, dissolved in water to exactly 100 cubic centimeters, at a temperature of 28° C. The sugar weight on which the instrument is nominally graduated, at 17.5° C., is 26.048 grams, but that weight causes a deviation of only 99.70° divisions instead of 100.

Very considerable errors may arise from the glass flasks used in making up the sugar solution to the standard volume being incorrectly marked. The flasks usually employed nominally hold either 50 or 100 cubic centimeters—a cubic centimeter being the space occupied by 1 gram of water weighed in *vacuo* at 4° centigrade. The capacity of a flask can easily be tested by weighing it when empty and then

when filled with water to the mark, but if this is done at a higher temperature than 4° C. a correction must be applied for the loss of weight the gram-volume of water suffers by expansion. Thus, at a temperature of 28° C., 50 true cubic centimeters of water weigh only 49.7675 grams in *vacuo*, or 49.7665 grams if weighed in air in the ordinary manner. Five of the laboratory flasks, which had been obtained from three different makers, were found to contain the following weights of freshly distilled water when filled to the 50 cubic centimeter mark at 25° C—

	Grams.
1	49.9885
2	49.9850
3	49.8500
4	49.8585
5	50.2200

The mean weight being 49.9804 grams, which represents 50.2149 cubic centimeters instead of 50. A sample of sugar actually polarizing 96° (the standard at present adopted for V. P. refining crystals) if dissolved in 50.2149 cubic centimeters instead of 50 would give a reading of only 95.59°, thus showing an error of —0.41°. An actual determination made with a flask holding up to the mark 50.1875 grams of water, with a sugar really polarizing 99.50°, gave a reading of only 98.80°, the error thus experimentally determined being —0.70° as against the calculated one of —0.74°. As refining crystals for the American market are required to polarize not less than the standard, and a reading even 0.10° below may cause the rejection of a parcel of sugar by an intending buyer, it is evident that the careful testing of the sugar flasks is by no means superfluous labor.

On account of the frequent breakage of the glass tubes used to contain the sugar solution for the polariscope, brass ones have been substituted at the laboratory, and are greatly to be recommended. Although the linear expansion by heat is nearly twice that of glass, yet the influence on the tubes of differences of climatic temperature is too small to appreciably affect the polarization. Thus a brass tube of exactly the right length, namely, 200 millimeters, at the standard temperature of 17.5° C., on being brought to this colony with a prevailing daily temperature of about 28° C. would only increase in length 0.04 millimeter, and would consequently raise the readings only +0.02°. In the case of glass the error would be about +0.01°.

8. A good deal of time has been spent in ascertaining the best means of analyizing molasses, the subject being a rather troublesome one, and very inadequately treated of in books. When solutions of crystalizable sugar or *sucrose* are treated with acids, the sucrose becomes converted into *glucose* or "invert sugar." The invert sugar produced really consists of a mixture of two kinds of glucose, called respectively "levulose" and "dextrose" from their action on polarized light, but, as the rotatory power of the levulose predominates, the invert sugar polarizes to the left. A solution of sucrose polarizing one hundred divisions to the right causes, after heating with acids, a deviation of forty-four divisions to the left at a temperature of 0° C. The lævo-rotation of the invert sugar regularly diminishes with increase of temperature in the proportion of half a division for each degree centigrade. At the temperature of this colony the deviation is about thirty divisions. When solutions of sucrose containing invert sugar are submitted to polarization, the reading obtained is the difference between the dextro-rotation of the one and the lævo-rotation of the other, and therefore only forms a correct guide to the amount of sucrose when the amount of invert sugar is known and its influence allowed for. At the temperature of this colony invert sugar masks or conceals $\frac{38}{100}$ of its weight of sucrose; in England about $\frac{34}{100}$.

Molasses contains not only sucrose, but a considerable proportion of glucose, and the doubtful point is whether the glucose does or does not affect polarized light like invert sugar. Certain sugar analysts say yes, and correct their polarimetric readings accordingly; others, on the contrary, declare that the glucose found in cane products differs from invert sugar in having no rotatory power whatever and therefore that no correction is necessary.*

*The following extract from Tucker's Manual of Sugar Analysis, 2 Edit. 1883, p. 173, will show the present unsatisfactory condition of the subject: "All raw sugar and molasses from the cane contain invert sugar, sometimes in large amounts. Inasmuch as the rotatory power of invert sugar made by acting upon cane sugar with acids is strongly to the left, a mixture of the two will give in the saccharmeter a reading too low as expressing the cane sugar. It has been considered that the invert sugar in the products of the cane possesses the same rotatory power as that artificially prepared, and it was customary with some chemists to correct their po-

The glucose in molasses originates in two ways—(i) by the accumulation of that originally present in the juice, and (ii) by the conversion (perhaps inversion) of sucrose during the manufacture of juice into sugar. The reporter has therefore made two series of very careful experiments, one on the glucose naturally present or produced in the cane, the other on the glucose in several kinds of molasses.

The quantity of glucose in the juice of fresh and mature canes is so small that its effects upon polarized light are inappreciable. But on keeping canes for some weeks after being cut, the glucose augments at the expense of the sucrose, until finally little else but glucose can be found in the juice. Also, in the tops of immature canes, glucose is present in large proportion relative to the sucrose, sometimes more than equaling it in quantity. The amount of sucrose in the juice of cane in both conditions was carefully determined—first, by the polariscope; second, after inversion, by Soxhlet's volumetric method. The glucose was also determined. The following results represent parts by weight in 100 of juice by measure:

	Sucrose by polarization.	Sucrose by analysis.	Glucose.	Sucrose + .28 glucose.
I. Stale mature cane juice	1.44	1.34	20.41	7.15
II. Stale mature cane juice	0.80	1.02	18.50	6.20
III. Fresh immature cane	5.37	5.53	5.67	6.96
IV. Fresh immature cane juice	1.38	1.73	3.89	2.47

These experiments, which the reporter believes are entirely novel, fairly prove that the natural glucose in cane has practically no action on polarized light, and is therefore different from invert sugar artificially prepared. The amount of sucrose shown by analysis agrees fairly well with that indicated by direct polarization, so that the glucose, although present in some cases in quantities enormously exceeding the sucrose, exercises practically no effect on the polarization. The column headed "sucrose +.28 glucose" shows the amount of sucrose that would be indicated by applying the ordinary correction for invert sugar, at the temperature of 28° C.

lariscopic readings by adding to them $\frac{3}{100}$ of the invert sugar as found by the estimation with copper liquor.

Recent researches of Girard and Laborde tend to verify a previous observation of Dubrunfant—that the invert sugar in cane products *is optically inactive*, and hence the use of the co-efficient $\frac{3}{100}$ involves an error. The results of the above chemists are based on the examination of (1) sirups artificially prepared from raw cane sugars of many sources; (2) of molasses from the sugar plantations; and (3) from the refiner's molasses. The cane sugar was estimated directly with the polariscope, and also very carefully by inversion and gravimetric determination with copper liquor. The invert sugar was determined in the same manner. In the majority of the samples examined the percentage of sugar by the copper method agreed quite closely with that by direct polarization, the latter being as often above as the former. Other investigators, among whom may be mentioned Muntz, Morin, Gill, and Halse, have confirmed the conclusions of the French chemists by an extended series of experiments upon raw sugar of all origins, cane juice, molasses, etc. Morin shows that analysis of raw sugar corrected by the co-efficient $\frac{3}{100}$ generally add up to over 100, even when large amounts of undetermined organic matters are present. As beet sugars and sirups rarely contain more than traces of invert sugar, these results have no special application in that direction.

Meissl has recently, by a most elaborate investigation, gone over the ground covered by the authorities named, with the result of completely contradicting both their facts and their conclusions.

Working with seven low-grade raw sugars from the cane, carrying from 5 to 18 per cent. invert sugar, and determining the cane sugar after inversion, and the invert sugar directly by Soxhlet's improved manipulation with Fehling's solution, he finds the cane sugar by inversion to be always considerably higher than the saccharimetric reading, the difference varying with the amount of invert sugar present, that by the use of the co-efficient $\frac{3}{100}$ the corrected percentage of sugar agrees closely with that by inversion; that the sirups extracted from these sugars by alcohol, and containing from 27 to 39 per cent. invert sugar, give essentially the same results as above. He also proves that the sugars, on complete analysis, do not add up to over 100, but the quantity of organic matter not sugar varies from 1 to 8 per cent. Meissl considers the conclusion of the chemists cited, as to the optical inactivity of invert sugar in commercial products, as erroneous, and ascribes the error to the use of the gravimetric met with Fehling's solution, which he claims gives results that are too high.

A similar series of experiments with the ordinary kinds of molasses gave results as follows:

	100 parts by weight contained—			
	Sucrose by polarization.	Sucrose by analysis.	Glucose.	Sucrose + .28 glucose.
I. C. P. molasses (?)	40.15	40.31	16.98	44.90
II. 1st V. P. molasses	33.00	36.97	18.30	38.12
III. 2d V. P. molasses	35.64	38.74	17.71	40.59
IV. Bloomer molasses	40.15	43.11	25.00	47.15
V. Bloomer molasses	44.00	46.98	21.23	49.94
VI. 2d V. P. & triple effet	0.00	0.77	45.05	7.22

In the first sample the glucose was inactive. The origin of this sample could not be ascertained, but it appeared to be common process molasses. In the remaining samples the glucose exercised some left-handed rotation, but in no instance was the effect equal to that produced by invert sugar, as indicated in the last column. A striking instance is furnished by sample VI, the saccharine portion of which consisted almost wholly of glucose. Had this been invert sugar, it would have caused a lævo-deviation in the polariscope of —11.84 divisions of the scale,* whereas the reading was only.—1.54. In this case, therefore, no less than $\frac{13}{15}$-$\frac{14}{15}$ of the glucose, or 88.1 per cent., was inactive on polarized light. These experiments show that the glucose in molasses is too variable in its action to allow of any fixed correction being applied.

The method of determining sucrose in molasses now adopted at the Government laboratory is, shortly, as follows:

Twenty grams of molasses are weighed out and dissolved in water to exactly half a liter. In this solution the glucose is determined by Soxhlet's volumetric method. One hundred cubic centimeters of the same solution are then poured into a convenient flask with 5 cubic centimeters of strong pure hydrochloric acid, and the mixture heated to boiling over a naked flame. The boiling is continued for about one minute, and then the contents of the flask are cooled under a tap of running water.† The acid present is partly neutralized by sodium hydrate solution, and finally by sodium carbonate in powder.

The neutralized solution is made up to half a liter, and the glucose, representing the total sugar, also determined by Soxhlet's process. Deducting the glucose originally present from that representing the total sugar, the remainder multiplied by .95 equals the sucrose.

The graduated glass instruments used are always the same, and consist of two 500 cubic centimeter (or ½ liter) flasks for making the solutions, and one 100 cubic centimeter burette, with glass stop-cock for measuring the molasses solution for the copper test and for boiling with acid. Each of the flasks was graduated to hold exactly five times the volume of the burette. Lastly, a 25 c.c. pipette is used to measure out the copper test. The amount of glucose equivalent to the volume of solution delivered by this pipette is always accurately determined for the copper solution employed. The copper test is made from two solutions:

No. 1, consisting of 69.278 grams of copper sulphate dissolved in water to a liter.

No. 2, consisting of 346 grams Rochelle salt and 80 grams caustic soda sticks, dissolved separately in water and made up to a liter.

These solutions are mixed for use in exactly equal proportions but are preserved apart. Errors arising from the deterioration of the copper test are thus avoided.

In using the copper test 25 cubic centimeters are measured into a porcelain basin and a quantity of the liquid to be tested sufficient to nearly reduce the copper liquor run in cold from the burette, sufficient water being also added to make up the whole to 50 cubic centimeters. The mixture is then boiled for two minutes, the precipitate allowed a moment or two to settle, and the supernatant liquid filtered.

If the filtrate has a blue color or gives a chocolate precipitate when tested with excess of acetic acid and ferrocyanide of potassium solution, sufficient of the sugar liquid has not been added and the experiment must be repeated, using more sugar

* —12.61 if no sucrose had been present.

† Special experiments have been made to prove that this treatment causes complete conversion of sucrose into glucose.

solution each time, until only a bare trace of copper can be detected in the filtrate by the ferrocyanide. When this point is reached the quantity of sugar solution used contains an amount of glucose equal to the 25 c.c. of copper test (nominally .125 grams), and a simple calculation shows the total amount of glucose in the whole solution and in the molasses from which it was prepared.

Very convenient porcelain basins called "cassaroles" are employed for boiling the copper test. They hold about 6 fluid ounces, and are furnished with porcelain handles. To support them over the lamp, a hole is made in a square of asbestus cardboard sufficiently large to allow the bottom of the basin to pass through. The asbestus being placed on the earthenware screen that surrounds the lamp, effectually prevents the flame from playing on the sides of the basin above the contents, and the consequent accidental reduction of the copper liquor.

For determining the value of the copper solution used in preparing the copper test a very simple and rapid method was devised at the Government Laboratory: 25 cubic centimeters of the copper solution No. 1 are measured into a platinum basin, acidified with 1 cubic centimeter of strong sulphuric acid, and then a foot or two of magnesium ribbon are coiled up and placed in the basin, which is then quickly covered with a glass plate. In a very few minutes the whole of the copper is precipitated in the metallic state while the magnesium is wholly dissolved.

The liquid is poured off from the precipitated copper, which is then washed by filling up the basin with water, and then carefully decanting it off. This is repeated several times. The washing is completed by adding in place of the water, firstly, strong alcohol, and lastly, ether. After draining the basin is placed in the hot air oven for a few minutes to dry, and then weighed. The weight of copper found multiplied by .5678 gives the amount of glucose that will reduce 25 cubic centimeters of the copper solution. The novelty of this process is in the use of metallic magnesium to precipitate the copper. Metallic zinc has long been used for determining copper in general, but it has drawbacks from which magnesium is quite free. The whole operation with magnesium can be performed in half an hour. Many experiments have been made with this simple method and have proved that the results obtained are almost perfect.

E. E. H. FRANCIS,
Government Analytical Chemist.

SUGAR IN URUGUAY.

REPORT OF CONSUL HILL.

In reply to circular dispatch of July 14, 1887, I have the honor to submit the following report:

Sugar is not cultivated or produced in Uruguay.

The custom-house records contain no accounts of the exportation of sugar at this port, and there is no law providing for the levying of export duties on it if it was exported. The import duties are 30½ per cent. ad valorem, and to this is added at the custom-house 65 per cent. *contribucion directa* (direct tax), and 12 per cent. for storage and handling. The value of sugar for the purpose of levying the import tax is ascertained by law, and is as follows: Refined sugar is valued at $10 (pesos) per 100 kilograms; not refined (all grades) sugar is valued at $8.50 (pesos) per 100 kilograms, or, reduced to United States weights and money, refined sugar is valued at $46.92 per 1,000 pounds; not refined sugar is valued at $39.88 per 1,000 pounds. From this data we can readily see that the Government collects a tax on all sugar that passes through the custom-house of near 1½ cents (United States currency) per pound if it is refined, and if it is not refined near 1⅛ cents per pound.

List of countries from which Uruguay imports sugar, with the amount from each (year of 1885).

Country.	Kilograms.	Country.	Kilograms.
Brazil	5,966,694	United States	282,698
France	2,218,553	England	168,969
Germany	1,169,876	Spain	145,276
Holland	308,552	Cuba	160,356
Belgium	581,914	All other countries	602,679

EDWARD J. HILL,
Consul.

UNITED STATES CONSULATE,
Montevideo, Uruguay, October 31, 1887.

TRADE OF PEKING.

REPORT OF MINISTER DENBY.

The commissioners of customs for the Ha-ta-Mên Gate at Peking report that trade has been very bad at Peking during the last year. The collections fell short of the amount fixed by law 141,842,7.12 taels. The causes assigned are fluctuations in exchange, high cost of food, and dearness of carriage, the heavy rains during the summer, and the bursting of its banks by the Peiho River, by which boat traffic was greatly impeded. The foreign customs also steadily absorb an increasing portion of duties.

The opium duties have also declined. According to regulations, which date back to 1859, all opium, whether foreign or native, is made subject to taxation. The receipts are kept apart from those from other goods, and are sent separately to the board of revenue. At all stations on navigable rivers connected with the sea-ports the duty, as at Shanghai, was fixed at 30 taels per picul. At the Ha-ta-Mên, and all barriers on land lines of route, the charges were only 20 taels per picul. The duties hitherto have been mostly collected on foreign opium, the collection on native opium being trifling. The largest amount ever collected was about 9,000 taels. Early in the present year the board of revenue notified the customs authorities that there was to be no duty collected on foreign opium, the duty of 80 taels on the chest covering all charges.

Under these circumstances the collection on opium has been about 1,400 taels.

CHARLES DENBY.

UNITED STATES LEGATION,
Peking, October 26, 1887.

MINES OF ASIA MINOR.

REPORT OF CONSUL JEWETT.

The mineral resources of Asia Minor are very extensive, but are little developed. Under any other government they would be productive of great wealth to the country, but under existing conditions they are practically valueless. Comparatively few of the mineral deposits are worked, and those that are give little or no profit, owing

primarily to the lack of fuel in their immediate vicinity, and the lack of roads and means of transportation of the ore; and, secondarily, to the restrictions placed upon their working by the Government.

Among the known mineral deposits the following may be mentioned:

In the Euphrates district.—Avgana Maaden, a copper mine said to be of magnificent resources. Keban Maaden, argentiferous lead of good quality (1½ drams silver in 2¾ pounds (1 oka) smelted metal), also iron ore in abundance. Near Paln, three miles from the Euphrates, coal of fair quality is found. There are also in this vicinity traces of sulphate of copper, indicating large deposits of copper ore, and extensive unworked quarries of marble and alabaster.

In the Konia district the most important mineral deposits are at Bulgar and Bereketly. At the latter place the ore is lead; at Bulgar the lead has a mixture of gold, silver, and copper. These mines are worked on the following system: The mining is contracted for by a Government commission, which pays 32 paras or 3¼ cents for each oka (2¾ pounds) of lead. The Government pays for transport (donkeys and camels) and for fuel. The forests in the vicinity having long since been destroyed, wood has to be brought from a distance of 20 or 25 miles. The transport of lead to the nearest sea-port, Mersine, costs at the rate of about $14 per ton, and to Constantinople, where it is sold to the Government arsenal, about $65 per ton. The lead sells for about $85 to $95 per ton. The annual output is about 100,000 okas per year, but a small proportion of what might be produced under better management. The Bulgar mine is high up on a mountain side overlooking a deep valley in the Taurus range. There are several galleries, and the whole mountain appears to be a mass of mineral. The Government pays the miners 32 paras (3¼ cents) for each dram of silver and 30 paras for each oka (2¾ pounds) of lead. There are sixteen furnaces. An oka of the ore yields about one-half dram of silver. The work is carried on only intermittently, owing to lack of funds. The cost of each furnace, holding 8 or 9 tons, for 120 hours, is said to be as follows:

	Piasters.
Charcoal	800
Wages of workmen (8 bellows, 2 stokers)	300
Transport of mineral	250
Three stones	12
Charge for withdrawing 100 okas lead	150
To owner of furnace	14
To overseer	20
To miners	100
	1,246
Equal to	$54.82

In the Karput region are the famous mines of Keban. These have been worked for over three hundred years. In former years they were a source of large revenues to the Government, but in late years, owing, it is said, to mismanagement and peculation, the profits dwindled down until there was an actual loss, and the work was abandoned some six years ago.

In the Kairsarieh and Zeitoon district iron ore is found in large quantities. The villagers reduce it by a rough smelting process and sell it at about 4 cents per pound.

In the mountain district bordering on the Black Sea, near Onniate, the inhabitants employ themselves in extracting iron ore in the same way as did the Calybes, who formerly inhabited this coast, as described by Virgil. There are no mines. The ore is found in small irregular nodules embedded in yellow clay, which covers the surface of the hills. It is never found more than a foot or two below the surface. The metal is extracted in a common blacksmith's forge, worked by a single family, whose hut is close by. When they have exhausted the ore in the immediate vicinity they move their hut and forge to some more productive spot. The ore yields but about 10 per cent. of metal.

Province of Sivas.—The most important mines in this district—Sivas—are those at Lidjessy, Kara Hizzar. These are worked by an English company under a Government concession. As these are carried on under the most favorable conditions practicable in this country, with improved machinery and intelligent management, some information in detail regarding it may be of interest, as showing the conditions under which mining is carried on in Asia Minor. The mines were first worked by a Turk, in 1838, under a concession and an annual royalty of 250 okas of silver. After twenty years the Government withdrew the concession and took the mine into its own hands. This was soon abandoned, however, and in 1863 a fresh concession was granted to a Constantinople firm, who paid an annual royalty of 140 okas of silver. They, in turn, disposed of their interest to a German company. The German company worked it unsuccessfully for three years, and then transferred it to the present owners, the Asia Minor Mining Company (Limited), of London. The company pays the Government a royalty of 5 per cent. The company has as yet realized no profits, the distance from port, absence of railroads or good wagon roads, and consequent expense of transportation, using up the profits which would otherwise accrue.

For the particulars given regarding this mine I am indebted to the courtesy of W. M. Twelvetrees, esq., manager.

The mountain in which the mine is situated is traversed by two principal lodes running east and west. The mining operations consist of driving galleries or levels horizontally upon these lodes and taking away the ore in the lode-rock between these levels. There are ten principal levels extended through the hill as far as 650 meters. The vertical distance between the highest and lowest is 1,000 feet. Drainage of the mine is therefore an easy matter, and no pump work is required. Footways, with ladders, communicate between the levels, so that the whole mine, from top to bottom, can be traversed without going outside.

Methods of working.—The ore stuff broken in the mine contains on an average 9 to 10 per cent. of lead. The ore could not of course be exported in that form, the cost of transport would exceed its value tenfold. There being no coal mines near, or forests in the neighborhood smelting is impracticable, and the company is obliged to adopt a washing process. This involves a loss of metal estimated at 15 or 20 per cent. The dressing works where this washing process is carried on have been erected at a cost of £25,000, and will compare favorably with any of their kind in Europe. The process is as follows:

First, the stone as it comes from the mines is passed between the steel jaws of a stone-breaker, which reduces the lumps to about the size of the fist. It then falls upon two rotating tables, at which boys

stand picking out the pure ore which need not be washed and the dead rock which it is useless to send through the washing machinery. The remaining portion falls from the tables into tram-wagons, which are wheeled to the main building. Here the ore is passed between steel crushing-rollers, driven by a 34-foot water-wheel. From the crushers it is carried through perforated revolving cylinders, which size or classify the stuff and distribute it to fourteen self-acting jigging-machines, which separate the ore from the rock by means of the agitation of water. The water works up and down through sieves, and the particles of lead, being of a higher specific gravity than the stone, sink to the bottom, while the stone is carried away over the top as refuse matter. Sixteen round self-acting buddles receive the finer ore in the form of slime or fine sand. The whole process is complete, continuous, and self-acting from the roughest grade to the finest. The water from the machinery is run into catch-pits, to retain the fine lead held in suspension, and afterwards into a large basin, to diminish the pollution of the river by allowing the water to become somewhat purified by settling.

In summer the water-power is insufficient and the machinery is then driven by steam, a 35 horse-power vertical engine with three multitubular boilers being used.

The cost of the works was as follows:

Dressing-floors	£12,879
Machinery	11,268
Mountain canals	1,483
Total	25,630

Transportation.—The work of carrying the ore to Kerasunda, the nearest port on the Black Sea, is performed by muleteers, who deliver it at the coast, 100 kilometers distant, at the rate of 50 to 70 paras the batman, according to the season, equal to about $6 to $8.50 per ton (2,000 pounds). The shipping charges at Kerasunda amount to 30 piasters ($1.32) per ton, and the freight thence to Liverpool, per direct steamer, is 12 shillings ($3) per ton. There is an export duty of 1 per cent., and the ore is only shipped after the payment of 5 per cent. royalty to the Government. The ore is shipped in bags, purchased in England, costing 9 cents each, delivered. They can only be used once.

Cost of production.—The raising and mine cost per ton marketable ore averaged as follows for the year 1886, including wages, material, salaries, and general charges:

Exploratory	$9.94
Productive	38.32
Total	48.26

The cost of dressing, including wages and material, averaged $8.90 per ton. The ore sells at Liverpool at £13 15*s.* per ton.

The total quantity of crude ore produced in 1886 was 14,499 tons, giving a net product of 1,463 tons marketable ore.

Labor and wages.—The miners are alotted their work by contracts made at the beginning of each month at a given price per meter. The levels will, for instance, be driven 2 meters high and 1½ meters wide, and for each current meter advanced they will receive sums varying from 200 to 450 piasters ($8.80 to $19.80). For "stoping away" the ore the pay is less, namely, 120 to 150 piasters per meter.

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The wages of the under-ground workmen average about 35 cents per day.

The native miners make but slow progress, and for the main drives the company has been obliged to import Italians, who make three times the speed. The majority of the native workmen are Greeks. They are lazy, badly clothed and fed, have many holidays, and are content if they can earn barely enough to live on. The mining is carried on without intermission during the twenty-four hours in three shifts or relays of eight hours each. Two men work together at each point. The European staff consists of an English manager, a Cornish under-ground mine captain, a Swiss accountant, a Greek doctor, a Welsh superintendent of the ore-concentrating works, and a Welsh fetter.

As before stated, the mining has thus far been carried on at a loss, but better results are anticipated for the near future.

LIGNITE.

There is a deposit of coal in the mountains near Kara Hizzar. It is a pitchy, resinous lignite, burning freely, and emitting a good flame and much gas. In burning it leaves about 40 per cent. weight of ashes and clinkers. The lack of roads and the difficulty of access to the deposit make it impracticable to make use of this coal at present, but with better roads it may prove valuable in developing the mineral deposits in the vicinity.

ASBESTOS.

Near this city there is a large deposit of asbestos. It is not worked, and no attention is paid to it.

A. M. JEWETT,
Consul.

UNITED STATES CONSULATE,
Sivas, November 4, 1887.

AMERICAN PETROLEUM IN SYRIA.

REPORT OF CONSUL BISSINGER.

It is my agreeable duty to bring to the notice of your Department a commercial event that can not fail to prove a source of satisfaction to those of our citizens who may be directly engaged in the export trade, as it is doubtless one of gratification to a large class of the Syrian population, and particularly so to the residents of Beirut.

I refer to the much-coveted return to this market of American petroleum, which, after an absence of just two years, is about to make its re-entry into this city. A cargo of 30,000 cases of prime quality, with an additional lot of 100 cases of extra refined, is now on its way to Beirut, and its arrival is eagerly looked for within the next few days.

It would be superfluous to revert here to the various means adopted to successfully invade and flood this vast market with an inferior substitute, irrespective of pecuniary results, and without any regard to any of the laws governing commercial methods; how the

introduction into this country of the Russian naphtha was facilitated—not to say precipitated—by the complaints of dealers and consumers alike, of the fancied or real deterioration of the once absolutely irreproachable marks of American petroleum, and how the apparent indifference on the part of those engaged in this trade to the representations made to them by their Syrian correspondents, and the comparatively greater proximity of the Russian oil district to the consumer, and consequ[illegible] economy in the important item of transportation, proved potent factors in inducing dealers and consumers alike to lend a willing ear to the many advantages claimed for the new rival over its great American competitor, and resulted in forcing out of this market, for a time at least, the well-famed American petroleum that had entirely monopolized the supply of this country.

But the expectations of the much-heralded new illuminant were not realized, and, in justice to truth, it must be recorded that, after a short experience with the Russian naphtha, its inferiority became manifest and a general dissatisfaction resulted.

The putting up of the Russian petroleum, although in appearance in many cases an exact imitation and infringement upon American marks, was very defective, and the oil itself so imperfectly refined as to greatly increase its liability to danger, while the odor emitted from it has been to many quite a serious objection and to some a positive annoyance.

Many of the dealers, as well as a large number of consumers, soon recognized the incontrovertible truth that, notwithstanding its apparent cheapness, Russian petroleum was, in point of fact, based upon actual experience, the more expensive of the two; for it required a greater number of lamps than the American to produce the same amount of light, while its consumption was unquestionably more rapid; besides this there was a decided leakage by reason of the imperfect soldering of the cans, so that the loss to the consumer from these combined causes was computed to be not less than 25 per cent., while the difference in the market between the rival oils was but from 10 to 15 per cent. in favor of Russia. Had competition been fair, it will be easily seen that American petroleum would soon again have regained its lost supremacy, but the determination to force it wholly out of this country was so manifest that the market was literally flooded with the new oil at prices that meant ruin to the competitors.

Once the troublesome rival out of the way, the ruinously low figures to which prices had been depressed were gradually advanced. It was under this improvement in the market, and in response to the many inquiries for the old and renowned marks, that one of the most enterprising of Beirut's commission merchants, animated by this consulate, was finally induced to again enter the arena of competition by ordering a large cargo of American petroleum, the importation of which had been reluctantly abandoned, and it is confidently expected that this venture will prove as remunerative to the importers, who deserve the recognition of our exporters, as it will doubtless be welcome and acceptable to the consumers in Syria.

That the United States consulate has been unremitting in its efforts to bring about the revival of a former commerce, amounting in the aggregate to a yearly sum varying from $250,000 to $300,000 for the port of Beirut alone, need not, I trust, be emphasized, and it is to be earnestly hoped that those of our citizens engaged in this extensive

export trade will profit by the lesson of the past, and by furnishing a superior article at a moderate and reasonable price, again command a fair share of the oil supply of this market, and thus maintain the well-deserved reputation of the supeiror excellency of American petroleum.

ERHARD BISSINGER,
Consul.

UNITED STATES CONSULATE,
Beirut, December 1, 1887.

MINING LAWS OF THE SOUTH AFRICAN REPUBLIC.

[Transmitted by Consul Siler.]

Law on digging for and dealing in precious metals and precious stones in the South African Republic, being law 8, 1885, *as amended by law No.* 10, 1887, *entitled "An amendment of law No.* 8, 1885, *as amended by the 'Amendment of law No.* 8, 1885, *in* 1886,' *and Volksraad resolution, Art.* 1074, *dated July* 30, 1885."

[Approved and passed by Volksraad resolutions, Arts. 1250, 1252, 1254, dated July 23, 1887; Arts. 1256, 1262, 1265, 1269, 1275, dated July 25, 1887; Arts. 1277, 1284, 1286, 1293, dated July 26, 1887.]

ART. 1. The right of mining for and disposing of all precious metals and precious stones belongs to the state.

ART. 2. This law is applicable to diamonds, rubies, gold, and such other precious stones and precious metals as the state president, with the advice and consent of the executive council, may, with reference to this article of the present law, notify.

ART. 3. Whenever it may be deemed necessary, the government shall appoint a properly-qualified mineralogist as state mineralogist and assayer, whose duty shall be to investigate and fully report upon minerals in all the districts, and further to assist the government, by advice and otherwise, in all matters affecting mines and the development of the mineral resources of the country, under such regulations as the government, subject to the approval of the Volksraad, may prescribe. The salary of the state mineralogist shall be fixed by the Volksraad.

ART. 4. The government has the right from time to time to appoint one or more commissions of trustworthy and competent persons to investigate and report upon questions having reference to mining.

ART. 5. His honor the state president has the power, with the advice and consent of the executive council, to proclaim and set open government lands, and in concert, if possible, with the owner, also private lands, as public fields. The government does not guaranty the presence in payable quantities of precious stones or precious metals on proclaimed fields.

ART. 6. The unsurveyed lands proclaimed as public fields shall, as soon as possible, be surveyed and diagrams framed; of the government land at the expense of the state, and of the private lands at the expense of those interested.

ART. 7. Any land-owner shall be at liberty to prospect for precious stones or metals within the limits of his property free of license, and under conditions hereinafter set forth to exploit mines on his land or have the same worked. He shall not be allowed to throw open his ground to the public as a public field.

ART. 8. Any person who has a written permission from the owner of a private farm or piece of land to prospect such land may obtain from the mining commissioner or landdrost of the district in which he wishes to prospect the requisite prospecting license for the term stated in such written permission, not exceeding six months, upon payment of a license of 10s. per month, whereof one-half shall go to the land-owner.

ART. 9. The discoverer or discoverers of precious metals or precious stones in payable quantity on private farms or on government land, at least twelve miles distant from an already worked locality, shall, upon proclaiming of such farm or land, be entitled to hold and beacon off one claim, either reef or alluvial, which shall be called and registered as a prospector's claim. Moreover he or they shall have the right to work thereon without license as long as he or they shall remain owner or owners thereof.

ART. 10. In case a private land-owner has given permission to any one to prospect upon his land, or in case the owner has himself prospected upon his land, and precious metals or precious stones in payable quantities are discovered, the state president, with the advice and consent of the executive council, and in concert, if possible, with the owner, shall have the power to proclaim such land a public field, or to annex it by proclamation to an already proclaimed field.

ART. 11. A prospector who, in accordance with articles 8 and 9 of this law, finds payable precious metals or precious stones, shall not lose his rights through the unwillingness of the government to proclaim the same a public field, or to annex the same by proclamation to an already proclaimed field.

ART. 12. A member of the nearest diggers' committee, where such exists, delegated by Government, or otherwise the state mineralogist, the nearest mining commissioner, or landdrost, shall be the proper judge as to whether the precious stones or minerals discovered upon newly opened land are in payable quantity or not. The result of this examination shall be communicated forthwith to the prospector.

A full report of such discovery of payable precious metal or precious stones shall, with full particulars, be sent at once to the Government for its final decision.

If the farm be private property the proprietor shall have the right also to appoint on his behalf a person to institute an inquiry together with the person mentioned in the first clause of this article.

ART. 13. The holder of a prospector's license, as soon as, upon his report, investigation has been made and the payable character of the precious metals or precious stones on the land discovered by him is officially decided on by the Government, as defined in the foregoing article, shall have all the rights of an ordinary digger, besides his especial right as prospector, and these rights he shall have on private land, even though the same be not proclaimed a public field. He shall in that case, to enable him to work his claims, be entitled to use existent water on the farm, as may be agreed to in writing between himself and the proprietor of the farm. This article shall not apply when a land owner has especially hired any one to prospect for him, or when a special agreement is made before the granting of the written permission mentioned in article 8, whereby the prospector, with the object of obtaining the written permission in writing, waives his claim to the benefits of this article.

ART. 14. The owner or owners of a proclaimed farm or farms shall be entitled to beacon off for himself or themselves a number of claims, either reef or alluvial, which shall be termed "owners' claims," namely, one claim for a piece of ground of 50 morgen or less, two claims for a piece of ground of from 50 to 200 morgen, and one claim more for every additional 250 morgen, with a maximum of fifteen claims to a farm, to be held under license, after the prospector of the precious stones and minerals has beaconed off his prospector's and digger's claims. After the beaconing off of the prospector's and owners' claims other diggers may beacon off claims for themselves according to law.

ART. 15. The owner of private land, on which prospecting or digging operations are carried on, shall, at the end of each quarter, receive one-half of the returns from diggers' and prospecting licenses. All moneys from stand licenses accrue to the owner alone. The accounts for all such moneys will always be made out in the name of the owner, and the moneys, even in the case of lease, be only paid out to the owner or his agent.

ART. 16. The mining commissioner shall register a prospecting claim if the land containing the precious stones or minerals lies within his jurisdiction; or otherwise the landdrost of the district wherein such ground lies.

ART. 17. Where private farms are proclaimed public fields, or by proclamation are annexed to already proclaimed fields, no damage shall be done to the houses, buildings, water-furrows, gardens or cultivated lands, without the consent of the owner. Under all circumstances sufficient water shall remain free for the use of the proprietor, his household and stock, and for the irrigation of gardens and lands under cultivation at the time of the proclamation.

The water that is not required for such purposes must be allowed to flow unchecked. The use of it will be regulated by the lawful authorities in accordance with the provisions of this law.

ART. 18. The proprietor of a farm upon which precious minerals or stones have been discovered either by the proprietor himself, or, according to article 8, by a prospector, and who desires to possess the right for opening and working mines on such farm, shall furnish himself with a mining-right lease, to be obtained from the Government.

Government will, however, always have the right to refuse the granting of such a mining-right lease and either to proclaim such farm wholly or in part, or to annex it by proclamation to a public field, or to grant prospectors permission to

peg off prospectors' claims under prospectors' licenses. If the Government do not wish to proclaim the land or throw it open for prospectors, it shall not have the right to refuse a mining-right lease.

ART. 19. Should Government desire to proclaim or to throw open a farm or portion thereof for prospectors, the proprietor shall have the right, before other diggers, to beacon off preferent claims (the prospector excepted who had discovered the precious metal or precious stones, according to article 14). The Government shall give to the proprietor of a farm or portion thereof, which it desires to set open, one month's notice previous to the publication of the proclamation setting such land open, of its intention, to enable the proprietor to mark off his "proprietor's claims," pursuant to article 14.

ART. 20. Should the Government wish to proclaim or throw open for prospectors a farm or portion thereof in terms of articles 17 or 18, the Government shall first, in terms of article 5, have to consult with the proprietor, so as to define on what pieces of land (such as cultivated plots, gardens, lands, and water-furrows, in the vicinity thereof) prospecting and digging will be prohibited.

The Government will have the right to require from the proprietor or his representative that such pieces of land shall be properly fenced, within a period to be specified by the Government, which period shall not, however, be shorter than one month.

If such requirement be not complied with within the specified period, the Government shall have the right to carry out such fencing at the cost of the proprietor or his representative. On the private farms referred to in this article the Government shall have the right without payment to occupy and build on such pieces of land as are required for Government offices, etc. All such buildings shall remain the property of the state.

ART. 21. Prospecting and digging is forbidden in public squares, streets, roads, railways, burial grounds, erven and town lands.

ART. 22. The mining-right lease referred to in article 18 shall be granted for a stated period of not less than five and not more than twenty years.

For this shall be paid the sum of 10 shillings per morgen annually, to be paid in advance, while the holder of such mining-right lease shall be subject to the following conditions:

(1) He shall keep proper books of all finds, and use such forms for that purpose as Government may find necessary to prescribe.

(2) Inspection of the books shall be allowed at all times to the landdrost or other official appointed for this purpose.

(3) The Government shall always have the right instead of 10 shillings per morgen to demand the payment of 2½ per cent. of the value of the finds of the past year, as shall be approved by the books or by other means.

(4) If demanded by the Government officials the books shall be verified on oath by the proprietor or his book-keeper.

(5) Such other conditions as the Government may consider desirable.

ART. 23. Any one hiring a portion of land from the owner of a farm, or piece of land, with the intention of mining thereon, may obtain a mining-right lease on the same terms as the proprietor, if his lease contract is drawn by a notary and registered. This mining-right lease shall be renewable for as long as he remains lessee of the land. Land with licenses thereon may be transferred from one person to another under provision laid down in article 14 of law No. 7 of 1883. Each deed of transfer must be stamped as per article 82 of this law.

ART. 24. For each prospecting and proclaimed field the Government shall, if necessary, appoint a competent person as mining commissioner, whose salary shall be fixed by the executive council, subject to the approval of the Volksraad. The Government shall also have the right to appoint, if necessary, for each prospecting or proclaimed field a special judiciary officer, under the title of special landdrost, with criminal and civil jurisdiction equal to that of the landdrost.

On the appointment of such judiciary officer the Government shall accurately define the boundaries within which he shall exercise jurisdiction. The landdrost of the district concerned in each case shall cease to exercise criminal and civil jurisdiction within such boundaries.

In the exercise of jurisdiction by such special landdrost the laws and customs in use in the landdrost courts will be applied. The same rules shall also apply with regard to appeals to a higher court. Such special landdrost shall have within the boundaries of the field over which he has jurisdiction the same powers respecting marriages as are bestowed on a landdrost by the marriage ordinances. The Government will also have the right, besides the special landdrost, to appoint another judiciary officer with the jurisdiction of a landdrost in criminal cases and competent to hold preliminary investigations and to lay down further instructions for such officers.

With regard to the salary of such officers the provision above mentioned shall apply.

ART. 25. The oath of the mining commissioner shall be the same as that of a landdrost. All officials, on whatever diggings appointed, shall be duly sworn on taking office.

ART. 26. The mining commissioner shall have a clerk, who shall be secretary of the diggers' committee, and if there be no special landdrost, also public prosecutor and register of the lower courts. His salary falls under the same provision as laid down in article 24.

ART. 27. If necessary the Government shall appoint one or more additional clerks in the department of the mining commissioner.

The Government shall determine which of those clerks shall be secretary to the diggers' committee.

With regard to their salary the same provision shall apply as laid down in article 24.

ART. 28. The mining commissioner shall have supervision over the field or fields over which he has been appointed. He shall at the same time be vested with authority to regulate and to direct all matters relative to mining operations in accordance with this law and all regulations which may, by virtue of this law, be published by the Government. He will also have regard to the grievances of the diggers, and do all that is conducive to the public interest, the prosperity of the fields, and the sanitary condition of the population, for instance, by defining the places on which no digging or prospecting operations are to be carried on, so as to keep open roadways, etc., the whole regulation of the issue, if necessary, of stand licenses and the defining of pieces of land on which building operations may or may not be carried on. Government shall have the power to intrust him with the collection of personal taxes within the limits of the field under such regulations as Government may find it necessary to make. His civil and criminal jurisdiction shall, until a special landdrost has been appointed, be equal to that of a landdrost. He shall *ex officio* be a justice of the peace for the whole Republic. In regard to the administration of the civil and criminal jurisdiction of the mining commissioner, the laws and customs of force in the landdrost courts shall be applied. Also with regard to appeal to a superior court, the same laws will apply. So long as no special landdrost shall have been appointed the mining commissioner shall, within the boundaries of the field over which he has been appointed, have the same authority with reference to marriages as is given to landdrosts by the marriage ordinance.

ART. 28*a*. The Government shall on such fields as it may consider desirable and necessary appoint one or more of the clerks of the mining commissioner as a responsible clerk or clerks.

The Government shall have the right to assign such responsible clerks separate stands, on different portions of the proclaimed field. The responsibility of the mining commissioner is not removed by the responsibility of such a clerk serving in the office of the mining commissioner himself.

A responsible clerk may issue prospecting and digging licenses, subject to the same provisions and regulations as the mining commissioner. Licenses, signed and issued by such a clerk, shall confer the same rights as if they were signed and issued by the mining commissioner himself.

He shall be obliged to keep a proper register of all licenses issued by him.

He shall, as often as possible, but in any case once a week, pay to the mining commissioner all moneys received by him, and within seven days after the end of each month send in his reports and monthly statements to the mining commissioner.

The Government shall have the power to invest such a responsible clerk with the powers and jurisdiction of a resident justice of the peace within such limits as the Government shall determine.

ART. 28 *b*. All pieces of land, which are wholly inclosed by a public digging or prospecting field, shall be subject to the jurisdiction of the mining commissioner, or of the special judiciary officers, if there be such, of such digging or prospecting field.

ART. 29. It is not permitted to the mining commissioner, special landdrost, claim inspector, or their clerks on a prospecting or proclaimed field, directly or indirectly, to hold any claims, carry on any trade, undertake any agency of any sort whatever, or to have any share in any partnership in any digging or trading concern.

It is also forbidden for any landdrost, head official, or their subordinates to be connected with a mining company as director or other official thereof.

ART. 30. The mining commissioner may issue prospecting licenses, which shall be valid within a radius of not more than 25 miles beyond the limits of the field of which he is commissioner.

On proclaimed fields the mining commissioner shall be empowered to determine where prospecting operations may be carried on under prospecting licenses, and also determine on what pieces of land diggers' licenses shall have to be taken out.

The mining commission shall have a right on finding that a person is holding ground under a prospecting license, and not properly working on the same, to the satisfaction of the mining commissioner, with a view to discovering precious metal or precious stones, to order such person to take out a digger's license or abandon the ground. Every landdrost shall also have power to issue such prospecting licenses, valid within the limits of his district.

ART. 31. The mining commissioner shall keep proper books of all revenue and expenditure. He shall also keep proper registers of all licenses and rights granted by him to individuals or companies, as follows:

(*a*) A register of all trading licenses.

(*b*) A register of all licenses granted to diggers on the fields.

(*c*) A register of all prospecting licenses granted to prospectors on private land, with mention of the proprietor and the farm on which the digging is carried on. No prospecting license to prospect on private lands shall be granted without the written permission of the proprietor, unless the farm has been proclaimed a public digging, or thrown open by the Government for prospectors in accordance with articles 18 and 19.

(*d*) A register of all diggers' licenses issued on lands, subject to a concession or mining right lease, on which must be mentioned the name of the concessionaire or holder of the mining right lease and of the farm. No license to dig on lands subject to a concession or mining-right lease will be issued without the written consent of the concessionaire or holder of the mining-right lease.

(*e*) A register of all rights granted in respect of water, claims, etc.

(*f*) A register of all transfer of claims, or other mining rights.

(*g*) A register of all mining-right leases, granted by him according to art. 50.

(*h*) And such other registers as the Government may please to direct. The public shall be permitted to inspect such registers on such terms as the Government may direct.

ART. 32. He shall further send monthly statements to the treasurer-general and pay the public moneys into the office of the latter.

ART. 33. The following shall also be strictly observed by the mining commissioner:

(*a*) That no person shall trade or dig or prospect without a proper license.

(*b*) That his clerk, or clerks, shall keep proper records and minutes of all cases adjudicated in this court, and that his subordinate officials discharge their duties, and give account in all matters, and of all moneys, intrusted to them.

(*c*) That all Government offices, buildings, gaols, tents, goods, etc., are kept in good order.

(*d*) That all import duties on goods imported from abroad, and on which duty has not already been paid, shall be carefully collected.

(*e*) That all stamp duty and transfer dues payable to the Government on the transfer of claims and stands shall be duly paid.

(*f*) That all fees, or other moneys, payable to the state pursuant to this law, or any later laws and regulations, be promptly paid; and that all official documents, subject to stamp duty, are duly stamped.

ART. 34. On every field so proclaimed the mining commissioner shall appoint a time for the election of a committee of nine members, who must be elected from and by the holders of diggers' licenses within the jurisdiction of the mining commissioner for the term of twelve months, on expiry of which the members, unless re-elected, shall retire. Of this election the mining commissioner shall give notice by posting a notice at his office, and other public places, during fourteen days. Five members of the diggers' committee shall form a quorum.

ART. 35. Whoever may be elected as a member of the diggers' committee will have to show that he is the holder of a digger's license and also take the oath of allegiance to the state before the mining commissioner.

ART. 36. The proprietors of private farms proclaimed a public field shall, in addition to the elected members, have the right to sit and vote in the diggers' committee when they do not exceed the number of five.

If the proprietors exceed the number of five they shall elect five of their number, who shall sit and vote in the diggers' committee as representatives of the proprietors.

Such representatives shall keep their seats, although other proprietors succeed those who have elected them, so long as they remain proprietors themselves.

The regulation of such election is left to the mining commissioner, subject to the approval of the executive council.

Whenever rights regarding minerals and mining for the same on private farms have been transferred to lessees by proprietors by notarial contract duly registered

such lessees take the place of the proprietors in respect to sitting in the diggers' committee and in respect to the election of representatives, only when such has been expressly stipulated in the contract between proprietor and lessee.

ART. 37. The name of the committees referred to in articles 34, 35, and 36 shall be "The Diggers' Committee of the ——— Fields."

ART. 38. Any member of committee failing to attend three successive meetings shall be taken as having resigned. His seat is then vacant.

This provision does not apply to the landed proprietors or their representatives referred to in art. 36.

The committee shall have the power to grant leave of absence to not more than two of its members at the same time and for a term not exceeding four months.

ART. 39. The mining commissioner shall be chairman of the diggers' committee, with a casting vote in case of an equality of votes, and shall, with the committee, from time to time frame such rules and regulations as shall be suited to the local needs of the fields, provided that such rules and regulations are in conformance with this law or later laws or Volksraad resolutions, regarding the fields for which such rules and regulations are made.

Such regulations shall be sent to the Government for approval, and shall come into force after publication in the Government Gazette (*vide* art. 88).

ART. 40. If a diggers' committee cannot be constituted, or shall cease to exist, the mining commissioner shall exercise all the authority and shall discharge all the duties devolving on such committee. In case of a vacancy on the committee the mining commissioner shall without delay cause the same to be filled by a public election, of which fourteen days' notice shall be given, pursuant to art. 34.

ART. 41. From the decision of the mining commissioner or of the special landdrost, if there be one, there shall be an appeal to the circuit court, the judge sitting at Pretoria, or the supreme court.

ART. 42. [Repealed.]

ART. 43. Persons or companies holding concessions or mining-right leases on private or Government lands shall be free, without violating the concessions or mining-right leases, to permit persons to dig on their own behalf on such lands, subject to a concession or mining-right lease under such lawful agreements as such concessionaires or lessees and persons may mutually enter into; provided that each person so digging shall hold an ordinary diggers' license and conform with the laws and regulations with regard to such public fields.

ART. 44. All agents, attorneys, or advocates who, in accordance with the laws of the land, are entitled to practice in the civil courts, and who are admitted by the landdrost court, are entitled to admission to practice on the fields. Where the mining commissioner acts as landdrost only the foregoing persons shall be entitled to practice.

The tariff of licenses necessary to practice in any court on the fields shall be as fixed by ordinance.

No unlicensed person shall have the right of conducting cases for others in a court. It is, however, free to any person to conduct his case in person before any court on the fields. He shall not, however, be entitled to costs, save disbursements to witnesses, and for court fees and summonses. In mining cases not even agent's or attorney's costs shall be chargeable against the losing party.

ART. 45. The concessionaire or holder of a mining-right lease who permits persons to dig on the land on which he has a concession or mining-right lease, shall, in accordance with art. 43, be entitled to receive each quarter from the Government three-fourths of the moneys paid for licenses.

ART. 46. Diggers on land subject to a concession or mining-right lease shall be under the jurisdiction of the nearest mining commissioner or the landdrost of his district.

ART. 47. Proprietors and occupants of land on rivers, or other streams, shall have no right of action against the Government, or any gold mining company or gold diggers, or other companies or persons, who, under protection of the laws of the country, mine or dig, for any damages for soiling or rendering the water muddy by its use in mining.

ART. 48. It is referred to the diggers' committee on each proclaimed field, subject to the approval of the Government, to make such regulations with reference to water distribution as, under the circumstances of such field, may seem just and reasonable, regard being had to all rights of private owners.

With regard to public fields, it is expressly declared that no digger, under any circumstances, shall have a title or property right in the water flowing in any river, stream, or constructed water-course. Only the right to use such water can be acquired in accordance with law or regulations. In cases where damages have to be estimated, the value of the water shall not be taken into consideration. Govern-

ment will, however, be empowered to grant special water rights by agreement on Government ground.

ART. 49. The state president has authority to adopt measures for the establishment of a police force, and further to take such steps in accordance with this law as he may deem necessary for the general welfare of the fields and the maintenance of order. The said police force shall be under the command of the special landdrost, if there be one, and otherwise of the mining commissioner.

ART. 50. In future no concessions on Government land shall be granted. When, however, localities are discovered where mining is not payable to individual diggers, or where the ground, having been worked as claims, has been abandoned, such localities may be granted, under mining leases, to one or more diggers for a fixed term of years, to enable them to work the ground by machinery, or otherwise, on the following conditions:

(*a*) The extent of land granted under mining leases shall be not less than 150 yards by 150 yards, nor greater than 250 yards by 250 yards.

(*b*) Every application shall be posted during one month at the office of the landdrost of the district, or, should the land be under a mining commissioner, at his office, and also on the ground applied for, and shall contain a full description of the ground as to extent, situation, and whether it has been formerly worked or not.

(*c*) Anybody has the right to object to the granting under mining lease of any piece of land, which shall be done in writing, giving the grounds of his objection, the validity of which the landdrost, or the mining commissioner, shall inquire into.

(*d*) On the expiration of the time of notice, the landdrost or the mining commissioner shall immediately send in the application to the Government with his report. If the Government approves, then a mining lease shall be granted as per form in the schedules of this law.

(*e*) For this mining lease a yearly rental, calculated at 10*s*. per morgen, payable in advance, shall be chargeable. The mining lease must bear a stamp of the value of £5.

(*f*) Mining right leases may be transferred in the same manner and on the same terms, as claims and other mining rights.

(*g*) If the land to which a mining right lease has been granted be not mined, the mining lease shall not be renewed, unless under the express written authority of the Government.

(*h*) Such other conditions as the Government shall consider desirable.

ART. 51. Every application for a mining lease, right to lead water, protection, amalgamation of claims, etc., shall bear a stamp of the value of 5*s*.

ART. 52. Diggers being holders of adjoining claims, being not more than twelve in number, who wish to amalgamate their claims, can have the same registered as amalgamated claims, with all water rights belonging thereto, on application at the office of the mining commissioner. When registered, the share of each digger shall be clearly defined.

On granting the certificate of such amalgamation, under a stamp of the value of £2, the holders of the amalgamated claims shall enjoy the usual privileges of amalgamation as per regulations on the fields where they are situated.

ART. 53. When claims are amalgamated, the working of one or more of them at a time shall be deemed sufficient.

ART. 54. If under this law a tract of land be proclaimed a public (or other) field, such person or persons as may, under prospecting licenses, have marked off prospectors' claims shall have the right to retain such claims on compliance with this law.

ART. 55. The holder, or in case of amalgamation the holders, of one or more quartz reef claims, shall have the right to protection for from six to twelve months upon application in writing to the mining commissioner, mentioning that the protection is required to afford time to import machinery for the better working of the claims. This intention of importing machinery is to be supported by a sworn declaration.

The certificate granting protection shall bear a stamp of the value of £1 for each month of protection. The digger will, however, have to pay up the ordinary license money as well. On the applicant ceasing to be a licensed digger, the protection shall be deemed and taken to have lapsed.

ART. 56. No claim pegged off by a digger according to law shall be taken possession of by any one (be jumped), except when the holder shall for thirty consecutive days have ceased to work or carry on digging operations thereon.

When a licensed digger wishes to take possession of (to jump) a claim in this manner he shall first peg off the ground in accordance with the law, and without delay give notice to the special landdrost, if there be one, and otherwise to the mining commissioner, as also to the claim-holder or his representative, that he has done so. In such notice he must state for what reasons he has taken possession of the claim in question. The special landdrost, if there be one, and otherwise the

mining commissioner, shall thereupon appoint a day and hour, after receiving such notice, to try the case. The jumper shall be regarded as plaintiff in the case.

ART. 57. No protection shall be granted for alluvial claims, except in case of sickness or such exceptional circumstances as the mining commisioner shall deem sufficient to warrant protection. The time of protection to be fixed according to the circumstances in each case, and no fee is chargeable for granting the protection.

ART. 58. Claims belonging to the estate ofa deceased person shall not lapse nor be taken possession of (jumped) unless the executor fails to comply with the provisions of the law within thirty days after receipt of his appointment or the confirmation thereof by the orphan master.

Upon further regular compliance with the provisions of this law such c aims will be considered as assets of the estate and treated as such according to the provisions of the orphan law.

ART. 59. Whenever it shall be deemed necessary for the gen ral good, for public purposes, such as railways, canals, etc., to take away, wholly or in part, rights once granted, the Government shall have the right to do so upon compensation, to be mutually agreed upon between the interested parties and the Government. In event of such agreement being impossible the amount of compensation shall be fixed by one or more arbitrators elected by each side, with reference to an umpire, chos n by the arbitrators prior to the investigation, who shall decide upon any point or points of difference between the arbitrators.

ART. 60. A tract of land once proclaimed a public field, or portion thereof, can not be closed unless the white population is reduced to less than one person per 20 morgen. In case any such field is closed three years' prior notice shall be given, and proper measures taken for the right to continue working unexhausted claims, or the compensation of the holders, as the Government may deem fit.

ART. 61. Every white person who conforms to the laws of the country shall have the right to obtain a digger's license at 20*s.* per month, to dig or mine on a public fiel l for precious stones and precious metals.

He will also have the right to obtain a prospector's license for 10*s.* per month, which will give him the right to prospect on Government land within the jurisdiction of the official who issues the licenses, and which is opened for prospecting by the Government, and on private lands, in accordance with the provisions of this law.

61*a*. With respect to pegging off and thereafter holding a digger's or pro pecting claim by means of the holder of a power of attorney, the following regulations apply:

(*a*) Male and female persons residing within the country shall have the right to peg off and afterward hold diggers' or prospecting claims by means of the holder of a power of attorney, provided that, in case they are married women, they are assisted by their husband, and, in case they are minors, they are assisted by and through the intervention of their parent or guardian.

(*b*) Male persons of full age, residing outside the country, may peg off and afterwards hold diggers' or prospecting claims by the holder of a power of attorney, provided the power of attorney has been drawn up notarially and duly legalized.

No women or minors residing outside the country shall peg off diggers' or prospecting claims by means of the holder of a power of attorney.

The powers of attorney shall in every ca-e be deposited in the office of the mining commissioner concerned therein.

61*b*. If a digger's license expires, without being renewed on or before the day on which it expires, the claim for which the license was issued shall not be pegged off again by another person.

Within twenty-one days after the day on which the license has expired the former holder of such claim shall be entitled to recover his rights to such claim by taking out a new license with a further payment for each claim, of:

1st. A sum of money equal to the license moneys for the number of days that have elapsed since the day on which the former license expired; and

2d. A sum of 2*s.* 6*d.* for each day that has elapsed.

After the expiry of the said term of twenty-one days the claim will relapse to the Government, which shall sell the claim in such manner as it shall consider desirable.

ART. 62. Every licensed digger shall be entitled to hold under his license one alluvial and one reef claim. He shall also be free to buy any number of claims from other licensed claim-holders; in such case he must hold a digger's license for each claim.

When the joint claim-holders of an amalgamated block have registered their respective shares with the mining commissioner for purposes of this article by payment of £5 each of them will be free to peg off a new claim.

ART. 63. An alluvial claim shall be in extent 150 by 150 feet, and shall be properly beaconed off at the four corners with visible pegs and furrows in the direction of the claim. A quartz reef claim shall be 150 feet in the direction of the reef and 400 feet broad, either across, or on one side of the reef, as desired. In respect to quartz reef claims, two central pegs will be sufficient beacons for the first seven days. After the expiration of that time, four corner pegs must be substituted and the direction must be indicated by clearly defined beacons. In the case of quartz reef blocks of amalgamated claims, four corner pegs shall be sufficient for each block, but the names of the respective claim-holders in the block must be legibly marked on each peg, together with the date of amalgamation.

ART. 63*a*. The corner pegs of a claim shall be not less than 2 inches in diameter, and must stand at least 12 inches above the ground; two trenches must be dug at each peg, forming a right angle at the peg; such trenches shall be 3 feet long, half a foot wide, and 1 foot deep, and must show the direction of the boundaries of the claims.

All claims shall be numbered and bear the name of the owner legibly in writing, while the date of pegging off must be duly marked on the pegs.

When the claim inspector finds that any of the provisions of this article have not been complied with, he shall have the right to inflict a fine herefor of not less than 2*s*. and 6*d*. sterling, and not more than 5*s*. sterling. He shall give notice hereof to the owner or his representative, and he shall, at the same time, inform the mining commissioner hereof. The person fined shall have the right, within 8 days, to appeal to the special landdrost, if there be such, or otherwise to the mining commissioner. If, after the expiry of this term for appeal, no appeal has been noted, and the fine has not been paid at the office of the mining commissioner, the latter shall issue no further license for the claim, in respect of which the violation of the law has taken place, before and until the fine has been paid.

ART. 64. All newly discovered reefs must be reported to the mining commissioner before any claims on the same can be sold.

ART. 65. Each l censed digger shall, in addition to his claims, be entitled to a stand for his dwelling, in the immediate neighborhood thereof, but not in a locality known to contain precious metals or precious stones. He shall not be required to pay herefor, but must vacate his stand on the order of the mining commissioner.

ART. 67. No holder of a highly situated reef-claim shall have a right to cause a nuisance to others by the debris from his claims, or to obstruct others working lower down.

ART. 67. Every white person who desires to erect a store or houses or a dwelling on a proclaimed field shall apply to the mining commissioner for one or more stand-licenses therefor. Each license shall entitle him to a piece of land 50 by 50 feet in extent, in a locality approved by the mining commissioner, but not so as to interfere with mining operations on a locality known to contain precious metals or precious stones. The Government shall, however, have the right to give out, under a license, stands of greater dimensions where it considers such necessary.

Such stand-license, whether monthly or yearly, at the option of the applicant, shall be renewed from time to time. The cost of a stand-license on a piece of land of 50 by 50 feet will be 10*s*. per month, while the Government shall, with respect to stands of greater dimensions, determine the cost of the license in accordance with circumstances.

ART. 68. Every digger or license-holder shall, when called upon, render assistance in the maintenance of public order, under penalty, upon refusal, of forfeiture of his license and a fine of not more than £25.

ART. 69. Any person who, within the boundaries of a proclaimed field, shall be guilty of sedition, rebellion, or any unlawful resistance of the Government, or lawful authority on the fields, shall, in addition to the punishment fixed by law for such offense, forfeit all his rights and property situated on such field to the State. The person or persons on whose information any person may be found guilty of one or other of the said offenses, shall be entitled to the half of the forfeited property.

ART. 70. Any person trading without a license is liable to the penalties prescribed by the laws of the country; and any person who digs or prospects for precious metals or precious stones shall be punished with a fine of not less than £5 and not more than £25 for each offense, and in default of payment with imprisonment, with or without hard labour, for a period of not less than one month and not more than six months.

ART. 71. No person shall carry on any trade whatever in precious minerals, or precious stones, in the rough, under which is comprehended the purchase or sale or the bartering of such precious metal or precious stones, unless he shall have obtained a special license thereto, for which shall be paid £10 per quarter. Provided, however, that the individual digger, or a company, shall not need a license for the sale

of precious metals, or precious stones, mined for, and obtained by, or for, such digger or company. Government has the right to suspend wholly, or in part, the operation of the first part of this article with respect to one or more of the precious metals, or precious stones.

ART. 72. A licensed dealer in precious metals and precious stones in the rough shall keep such books of his dealings as the Government may from time to time be pleased to prescribe, and such dealer shall send to the auditor a true copy, attested by affidavit, of such books, in such form as the Government from time to time may direct monthly, on the first day of each month.

ART. 73. Any person digging for gold, etc., either for himself or for another, shall, on demand of the proper official, qualified thereto by law or by the Government, produce his license, in default whereof he shall be punished with a fine of from £1 to £3 sterling.

ART. 74. Any person guilty of altering, shifting, or removing the beacons, or pegs, of any claim, shall be punished by a penalty not exceeding £100, with the alternative of imprisonment, with or without hard labor, for a period of not less than three months, nor more than three years.

ART. 75. The holder of a license may make application to the mining commissioner for a piece of spare ground lying between two or more claims. The mining commissioner shall decide on the application according to the circumstances of the case, and his decision shall be final. The figure of this ground is not fixed, but the area in square feet shall not exceed that of a claim as provided by this law. Such ground must also be represented by a white person holding a license.

ART. 76. No colored persons, coolie, or Chinese can hold a license or be in any capacity engaged in working the goldfields, otherwise than in the service of white men.

ART. 77. No person may pay his colored servants in rough gold or uncut precious stones, under a penalty of not more than £500, or imprisonment, with or without hard labor, for a term not exceeding three years, and forfeiture to the state of such rough gol or uncut precious stones.

ART. 78. Any person purchasing, trading, or receiving rough gold or uncut precious stones from colored persons, either on a proclaimed public field, or elsewhere within the limits of the South African Republic, shall be fined a sum not exceeding £1,000 and imprisonment for a period of not more than five years, with or without hard labor, besides the forfeiture of such rough precious metal or uncut precious stones to the State.

ART. 79. A colored person, coolie, or Chinese selling, bartering, receiving, or disposing of rough precious metals or uncut precious stones, or being found in possession of such precious metals or uncut precious stones, shall be punished by the infliction of not more than fifty lashes and imprisonment for a term not exceeding twelve months, with or without hard labor, and forfeiture to the state of such raw precious metal or uncut precious stones.

ART. 80. Any person cutting a water-course through a road or footpath in use shall construct a proper, safe bridge; if he do not do so, any official or private person may fill up the furrow, and the offender shall further be liable to a fine of from £1 to £10 sterling, and in default of payment to imprisonment with or without hard labor for a period of from one to three months.

ART. 81. Any person guilty of willfully injuring or destroying a mine, claim, machinery, water-course, or other mining property or effects, or guilty of an attempt to commit such offenses, shall be punished with a fine of from £100 to £1,000, or with imprisonment, with hard labor, for a period of from one to ten years, according to the nature of the case.

ART. 82. When a person or company shall purchase from the Government or from private proprietors landed property, with or without a concession, as mining property, for the purpose of digging thereon for precious stones or precious minerals, and the purchase consideration is stipulated to be both in cash and in shares of a company already formed or about to be formed, the transfer dues (heerenrecht) shall be calculated only on the cash which is to be paid for the property and not on the shares, with this proviso, that if the appraised value of the landed property shall exceed the above mentioned cash, the transfer dues shall have to be paid on the appraised value.

If the purchase consideration be stipulated to be in shares only, the transfer dues shall be calculated upon the appraised value.

ART. 83. A colored person who has contracted, either verbally or in writing, to serve his master as a domestic servant or as servant in a store or shop, or to aid in working in any claim or water-course, or with machinery, on any proclaimed field, and who shall, without permission, withdraw or absent himself from his master's

service, or shall neglect, or refuse, to perform any work in discharge of his duty, which can be demanded from him, according to law, or who shall use threatening and abusive language towards his master, his master's wife, or any other person lawfully placed over him, shall be punished by a fine of not more than £2, or with imprisonment, with or without hard labor, not exceeding one month, or by flogging not exceeding twenty-five lashes. A servant, not being a colored person, guilty of a contravention of the offenses specified in this section, shall be punishable by fine in a sum not exceeding £5, or with imprisonment, with or without hard labor, for a term not exceeding three months. The mining commissioner shall further, within the limits of the proclaimed field over which he is appointed, have the same authority and discharge the same duties as a landdrost under law No. 13, 1880.

ART. 84. For each colored laborer employed on the diggings, the employer must procure a monthly permit, at the cost of one shilling, from the office of the mining commissioner. Every contravention of this section shall be punished by the infliction of a fine of five shillings.

ART. 85. To any person or company importing machinery to work one or more claims shall, in addition to the ordinary stand, be allowed by the mining commissioner sufficient ground, but not on a locality known to contain precious metals or precious stones, for the erection of such machinery, provided such allotment be possible without infraction of the rights of others, and upon payment of 2*s*. 6*d*. per month for every piece of ground of 50 by 50 feet.

ART. 86. For the right to cut fire-wood on Government land a permit for a wagon-load may be obtained at £1 per wagon-load.

Such permits are obtainable for Government lands from the mining commissioner. With respect to cutting wood on private land, an agreement must be entered into with the proprietor.

If a person pegs off as a claim a piece of land on which wood is growing, he shall, for any damage to be done to the wood, pay beforehand a sum of money as compensation for such wood, such sum to be determined by the mining commissioner by way of a valuation made by himself or by his instructions. Such sum shall be paid to the mining commissioner, who in default of payment shall issue no further license for such claim. The mining commissioner shall be obliged to make such valuation, or cause the same to be made, as soon as possible.

In respect to private lands, such sums shall be repaid to the private proprietor. Any person cutting wood without a permit, or without permission from the proprietor, shall be punished with a fine of £2, or with a week's imprisonment, for each offense, apart from the claim for damages for such wood as has been cut.

ART. 87. When a digger wishes to abandon his claim or claims on a public field in order to peg off for himself a new claim or claims, he shall be entitled to do so, provided he pulls out the pegs of the claim which he wishes to abandon and puts up for a week on the piece of ground a notice that it has been abandoned and also gives notice to the mining commissioner to the same effect, in default whereof he shall be liable to a fine of from £1 to £10 sterling, or imprisonment of from fourteen days to three months, with or without hard labor.

The mining commissioner has the right to refuse to issue licenses for abandoned claims within seven days of such notice, or after such time, if he suspects that the abandonment has taken place in order to evade the payment of transfer dues, or in case the claim is held by power of attorney to alienate the claim from the holder.

He may before giving out such claims first institute an inquiry, and shall have the right to refuse to issue such claims and to cause them to be sold by auction for the benefit of the state.

ART. 88. Special conditions and regulations shall be of force on every proclaimed field immediately on proclamation in the Staatscourant. The state president, with the advice and consent of the executive council, has authority to alter or amend such special conditions and regulations on the suggestion of the diggers' committee on any proclaimed field. Such alterations or amendments shall be of force fourteen days after promulgation in the Staatscourant.

ART. 89. The words "public diggings" shall signify a proclaimed area thrown open by lawful authority for digging and mining.

The word "claim" shall signify that portion of the field on which a person or persons or companies have obtained lawful right to dig or prospect.

Private ground shall signify the grounds belonging to individuals or companies, as shown by title deed or subsequent deed of transfer.

Government ground shall signify all lands belonging to the state.

The words "colored person" shall signify all African or Asiatic aborigines or any colored person, Coolie, or Chinese.

Further, all words shall be understood in the sense which they have in ordinary use.

ART. 90. All former laws, resolutions of the volksraad, and regulations bearing upon diggings are hereby repealed.

The rights obtained to claims under article 16 of the appendix to law No. 1 of 1883 shall remain of force and effect under this law.

[Article 56 of the amendment of August, 1887, embodied in the above law, as given above.]

This amendment shall have the force of law immediately after publication in the Government Gazette.

(Signed) S. J. P. KRUGER,
State President.
(Signed) W. EDUARD BOK,
Government Secretary.

GOVERNMENT OFFICE, *Pretoria, August* 10, 1887.

Cession of mineral rights.

[Volksraad resolution, article 1422, August 12, 1886.]

The volksraad, having taken into consideration executive council resolution, article 157, dated 9th August, "that all agreements as to the cession of rights to minerals or rights to dig which do not comply with the terms laid down in the first paragraph of article 14 of law No. 7, 1883, shall be *ab initio* void, and that no one shall have any right of action whatever in such an agreement," resolves to approve of such resolution.

The first paragraph of article 14 of law No. 7, 1883, is as follows:

"No cession of a right to minerals assumed to be present or actually present on any farm shall be legal without being embodied in a notarial deed and dully registered in the office of the registrar of deeds."

Powers of attorney.

The following is an extract from the Gold Fields Times with regard to the legislation of powers of attorney as required by article 61*a* of the gold law:

"We publish for the information of our readers the following regulations with reference to the authentication of powers of attorney sent from the different colonies and dependencies in South Africa. In the Free State all powers of attorney must be duly signed by a notary and attested by the state secretary, or in places where there are no notaries the landdrost is empowered to act as notary. In Natal the power, after being signed by a notary public, must be attested by the colonial secretary, or in his absence by the under colonial secretary. In the Cape Colony the power, when signed by the notary, must be attested by the registrar of the supreme or high court of the district, except in East Griqualand and Tembuland, where the chief magistrate is given the power of attestation. It may be here observed that no power of attorney notduly attested as above described will be recognized in the Transvaal. In this country the regulations regarding authentication are the same as those of the Free State. As no instructions have been given with respect to powers from Great Britain, the custom of the country will be recognized."

NOTES.

The depreciation of silver.—Minister Hall sends the following extract from "La Estrella," of Guatemala, 15th of November, 1887, on the expediency of a mixed gold circulation over one of silver exclusively:

For more than twelve years silver has continued to depreciate in value relatively with gold, owing to its increased production, while that of gold has diminished. The result is, that the silver sol, which twelve years ago was worth as much as the American gold dollar, is to-day, at the utmost, worth 72 cents in gold.

The countries of Central America twelve years ago, when the silver sol was worth intrinsically a dollar in gold, had a law relating to gold and silver circulation; but since the value of gold has risen the law has not been altered. Gold has gone out of circulation in all of these Republics, or has been sent to Europe, where it circulates. For more than two years past the export of the products of this country has exceeded the import of merchandise, and the result has been an importation of silver. Just now, owing to the high price of coffee, the exportation will exceed the importation still more, so that it will be necessary to bring much more coin into the country in payment of coffee than during the past two years, and this is the case not only in Guatemala, but in all the Republics of Central America, and the fact that soles pass current in all is causing a demand for that coin and a fictious rise in its value, which to-day is 10 per cent. more than its intrinsic value.

Properly speaking, this country should be a producer of gold and not of silver. The production of its silver mines is hardly worth mentioning, but its coffee, of which it produces 500,000 quintals, is sold every year for gold. It is therefore clear that there should be a reserve basis of gold in the country, and not of silver solely, although the latter will serve, as in England, for daily circulation.

We have said above that the sol is worth in the United States and in Europe 72 cents in gold, or, what is the same ratio, the gold dollar is worth $1.38⅓ in silver. Thus the par of exchange for bills on the United States would be 138 and upon London at sight 135. Thus, when bills at ninety days' sight in London are quoted at 125 or at 126 for sight bills, we should understand that exchange is really 9×35, or a little less than 6 per cent. discount. The system of calculating the value of the pound sterling at 5 soles and adding the difference as a premium of exchange is therefore absurd.

From the foregoing it is manifest that exchange on London is intrinsically at a discount of 6 per cent. This suggests that in order to equalize exchange, and for the benefit of commerce, much more coin should be imported. The question is, what kind of coin is the most suitable? Soles, gold coin of England, France, or the United States, or gold or silver bullion? Soles have the objection that there are but few of them compared to the wants of Central America, and for the same simple reason they are now at a premium; but the day will surely come when more soles will be coined, or other Republics will cease to use them, and their intrinsic value of 138 soles to 100 of gold will depreciate. That the importation of soles in the future will leave a loss of 9 per cent. and at the same time for all that we purchase abroad we shall have to pay in gold.

Gold or silver bullion could be brought here for coinage, but this has the objection of the expenses of the establishment, employés, etc., and the danger that in time some other government of Guatemala might reduce it in fineness. Taking all this into account, it is undoubtedly better to import gold coin, and the most suitable is British pound sterling, because this money is coined free of every charge. Whoever delivers gold to the mint in London receives in return the same value in coin,

while in the United States and in France the Government collects a small sum to cover expenses.*

We think the Government should establish by decree the legal value of the pound sterling at 6.50 and the value of the American half-eagle at 6.70 in soles—that is, that a debtor may make his payments in either coin until some law shall be passed establishing the relative values of gold and silver.

The immediate result of this measure will be that instead of selling their exchange at 25 per cent., those who have funds abroad would import pound sterling, and having probably to make payments to the banks or other capitalists they will transfer their pounds sterling in payment of their accounts. These pounds sterling would remain as a gold reserve in the vaults of banks and there would be more silver in circulation. The reserves in the banks and in the hands of capitalists, being in gold, would be better guaranty in times of panic than a reserve of silver, inasmuch as the former is current in all countries, and the debts of the governments, merchants, and others abroad are always for gold and not for silver; then there will be in the country wherewith to pay without being subject to an excessive premium to obtain gold.

Commercial treaty between Switzerland and Austria.—Consul-General Boyd Winchester writes, under date November 21, 1887:

Last year Switzerland abrogated the commercial treaty existing with Germany on account of the discriminating customs duties levied upon her exportations to that country, and so far the efforts to remove the difficulties in the way of the renewal of the treaty have failed. Now, within the past few days, Switzerland has given notice to Austria-Hungary of her purpose to discontinue the commercial treaty with that Government, made in 1868, at the same time expressing a willingness to conclude a new treaty. The grounds set forth by the Swiss Federal Council for this action is of the same general character that induced its similar course with Germany, and consists chiefly in the advanced duties levied by Austria-Hungary upon cheese, machines, and silk goods. It is thought the Austro-Hungary Government will be disposed to yield to the demands made by Switzerland resulting in a renewal of the treaty. To this end the large export of grain from the former to the latter country urges a speedy adjustment, as well as the wood interest, which is very considerable. The trade between Switzerland and Austria-Hungary is very large, covering a great portion of what may be termed the necessaries of life.

During the year 1886 Switzerland imported from Austria-Hungary:

	Francs.
Grain	85,446,000
Corn	900,000
Flour and groats	4,000,000
Sugar	3,000,000
Wine	6,700,000
Rough building-wood	100,000
Boards and laths	900,000
Live stock (mostly horses and cattle)	17,000,000
Rough skins	300,000
Hardware	540,000
Shoes, etc	300,000
Leather gloves	170,000

The general articles exported from Switzerland to Austria-Hungary for the same year were:

	Francs.
Watches	9,000,000
Machines	2,300,000
Cotton textures	3,800,000
Embroideries	800,000
Woolen yarns	1,200,000

*This is erroneous. The Mint of the United States does not charge for the coinage of gold. The writer in "La Estrello" has overlooked section 2 of the act of January 14, 1875, for the resumption of specie payment, which reads as follows:

"That so much of section three thousand five hundred and twenty-four of the Revised Statutes of the United States as provides for a charge of one-fifth of one per centum for converting standard gold bullion into coin is hereby repealed, and hereafter no charge shall be made for that service." (*Supplement to the Revised Statutes of the United States, vol. 1, p. 123.*)

	Francs.
Silk	3,800,000
Silk stuff and ribbons	2,900,000
Cheese	1,700,000
Analine colors	398,000
Straw goods	208,000
Jewelry	286,000

Child workers in the Netherlands.—Minister Bell writes, December 21, 1887:

Conformably to the view expressed by the Parliamentary Commission, the Government has submitted to the second chamber a project of law regulating the work of children.

The following are the principal provisions:

(1) Children under 13 years of age are prohibited from working in manufactories.

(2) They may be employed in agricultural work when over 12.

(3) The surveillance of the factories devolves not upon special functionaries but upon medical inspectors.

(4) Under 16 years of age the working day is fixed at ten hours, and no night or Sunday work is permitted until after the eighteenth year.

The project will probably become a law.

Wine crop of Cadiz.—Consul Ingraham writes, October, 29, 1887:

In regard to the wine crop of this year in the province of Cadiz, as well as all over Spain, the production has been from one-third to one-half less than that of last year, but the quality seems to be rather good, though the fermentation is not yet over. No sales have yet been made, and nothing about prices can be reported, the exportation not yet having begun; but a good demand is expected from France, judging from news received.

Inquiries for old high-grade wines continue to be scarce.

Denaturalization of alcohols in Spain.—Consul Ingraham sends the following:

Royal decree of November 10, providing that thenispection and denaturalization of foreign alcohols presented in the custom-houses be effected by the following means:

INSPECTION.

First operation.—In a clean trial tube shall be placed about two centimeters of the alcohol to be examined, and upon it carefully poured and sliding on the walls of the tube an equal volume of pure sulphuric acid, of 66° and colorless. It will be first noticed, without shaking, if a colored zone is formed between the two layers of acid and alcohol; and afterward the tube will be shaken in order to mix the two liquids, observing if the mixture becomes colored at the end of a quarter of an hour. If on making this operation is first noticed the intermediate colored zone and afterward a perceptible coloring, the alcohol is impure, and therefore objectionable for use as a drink.

Second operation.—In a clean trial tube some four cubic centimeters of alcohol will be placed, and on it poured an equal volume of a solution of caustic potash for the alcohol, prepared with one part of potash and three of distilled water. The tube will then be shaken in order to mix the two liquids, and it will be observed if the mixture takes a yellow color, looking at the tube by refraction against the light. If the liquid takes a perceptible yellow color by refraction it will be considered as impure alcohol, and therefore unfit for drink. The yellow tint, notwithstanding, which may appear in the meniscus of the liquid looked at by refraction shall be no obstacle to its acceptance.

For both operations a quarter of an hour's observation in each case will suffice.

DENATURALIZATION OF IMPURE ALCOHOLS.

(1) In the cask or vessel in which the alcohol is contained one part of petroleum oil will be added for each hundred of alcohol, or a liter for each hectoliter, shaking it well in order to mix both liquids.

(2) The inspection trials and the operations of denaturalization of foreign alcohols will be effected by the pharmaceutical inspectors of the custom-houses, with the intervention of the expert employés of the branch having charge of the entry, who will sign with the former the proceedings of the trial and denaturalization.

(3) The importers of foreign alcohols will pay the pharmaceutical inspectors 1 peseta and 50 centimes for each trial effected by the latter.

(4) It shall also be the duty of importers to furnish the petroleum oil necessary in each case for the denaturalization of the industrial alcohol which they introduce into the kingdom.

(5) The custom-houses will classify the foreign industrial alcohols by the brands used by the manufactories, and the trial will be made from one pipe out of ten of the same brand.

Statistics of Buenos Ayres.—Minister Hanna sends the following, based upon some tables published by Mr. Galarcé, a French statistician:

It appears there are 257 English houses in the city, and 402 German. The English capital employed aggregates $121,952,000, the German $16,610.670. The Italians outnumber all other foreign nationalities, even surpassing the Argentines themselves. The following figures show it: There are 7,729 Italian firms doing business, with a capital of $150,584,730; Argentine, 1,357 firms, with $241,766,550 capital.

As traders and merchants the Spanish far outnumber the French, the Spanish numbering 2,223, with $74,031,930 capital; the French 1,870, with a capital of $32,840,640. The French monopolize the cafés and bazaars; the Spanish the more substantial grocery and general supply trade. Jewish merchants are almost unknown here. United States investment, in trade figures very low indeed, amounting in all to but 26 business places, with a capital reckoned at $2,189,900.

In capital the Argentines stand foremost, the Italians next, and the English third; but as regards numbers the Italians are first, Spanish second, French third, Argentines fourth, Germans fifth, and the English sixth. So it appears, while the English stand sixth in number they stand third on the list of capitalists. The Germans not only outnumber the English, but with much less capital transact far greater business. Mr. Galarcé accounts for this result quite sensibly—that the Germans act on their own volition according to emergencies, while English enterprise is conducted more cautiously by trading syndicates abroad, chiefly located at Manchester and Liverpool. The Germans are driving the English steadily and surely; they feel it themselves and realize they must go or change their tactics. Our traders, more energetic, less timid, and thoroughly progressive, could hold the Germans in check, but the English are too conservative in their present mood to go through the struggle successfully.

Russian petroleum in Greece.—Consul Moffett writes:

I have already informed the Department of a trial importation by the Greek monopoly of 6,200 cases of Russian petroleum.

I have satisfaction now in reporting that this trial has not been satisfactory. The Russian oil is not suitable to this market, and is found to be much inferior even to the low grades of American oil which have been sent here. I have information from the directors of the Greek monopoly that no more Russian oil will be imported.

A proper regard for their own interests in sending oil of good quality seems to be all that is required of our exporters to enable them to retain the command of this market.

Emigration from Greece.—Consul Moffett writes, December 6, 1887:

Referring to my dispatch published in Consular Reports, No. 83, p.443, in regard to the character of recent emigration from Greece to the United States, and in support of the view therein taken, I would report that the Greek minister of the interior has just issued a circular addressed to the nomarchs of the kingdom instructing them to at once bring to the notice of the residents of their several districts the miserable condition of Greek emigrants to America, and enjoining them in every lawful way to dissuade others from the foolish idea of emigrating. This circular, it is stated, has been issued after receipt of a report from the Greek consul-general at New York, in which he sets forth at length the wretched condition of those lately arrived there.

Fiber Plants of British Guiana.—Consul Bunker has transmitted the "Report on the Botanic Gardens and their work," from which the following extract is taken:

Ramie or China Grass.—A barrel containing 1,000 cuttings of *Bœhmeria tenacissima* was obtained by purchase from Surinam. This is a variety of the ordinary *B. nivea*, said to be more robust in growth and more profitable to cultivate than that

which I have had more or less of since the institution was first begun, using it as a border plant in the gardens, and keeping up a bed in the nursery, in case any demand should arise for its industrial cultivation. This newly-introduced variety differs chiefly from the other by the silvery coating of down of the under side of the leaves being very slight, and not entirely concealing the green surface beneath it. I have said that of the two kinds it seems generally preferred by cultivators, but here, growing side by side with the other, any advantage that it possesses is not obvious. One seems as strong as the other and produces an equal number of shoots. In Surinam rhea is cultivated and exported to Holland as taken from the field, the stems only dried first and made up into bales. There can be very little profit on such shipments. What is wanted for this and many other fibers which could be produced here by cultivation, and in some instances procured wild, is a central factory, where they could be sent by the producer or collector to be cleaned. For instance, on the sandy reefs of the interior and about most Indian settlements a very large quantity of what the Indians call crowia and colonists silk grass, a variety of the pine-apple, the fiber of which is one of the finest, strongest, and most durable in the world, could be procured, and the quantity might be increased to any extent by cultivation at the places mentioned, and at others with soil suitable. Like the true pine-apple, which is also abundantly wild in similar situations in some parts of the colony, the only requisite condition is that the soil should be well drained and sandy. This is an industry that might reach large dimensions: for it is one the Indians would promptly take up, as they do readily the collection of any of the natural products of the country, and they would no doubt add the culture, if it can be called such, no labor being required beyond planting it in and about their settlements and cassava fields. At present they use the fiber for making fishing lines, some of which are exceedingly fine, and for strings for their bows, for tying on arrows, making hammock ropes, scale lines of hammocks, and for whatever purposes great strength and durability are necessary this fiber is used. The twine is made by twisting it with the open palm of the hand on the naked thigh. Sometimes they make hammocks entirely of silk grass. Such hammocks will last a lifetime. Surely the trade presents abundant opportunities for the use of such a fiber as this.

Karata.—Another valuable local fiber plant is the karata or keratto of Indians and colonists. This produces a fiber that is already well known to the market and is valued at about $135 per ton. It grows in similar situations to the crowia, and is found here and there very widely spread over the country. I have met with it in several places myself, and Mr. Thurn saw it still more remote between the Ireng and Cotinga Rivers on his way to Roraima. It is very common in cultivation, and freely adapts itself to any kind of soil. After flowering, the panicle, 20 feet high, is borne down with the ever-increasing weight of the aerial buds it bears. These buds quickly develop into plants large enough to set out in the field; so that here is no difficulty in its reproduction, and the planting might be carried to any extent.

Manila hemp.—Three plants of *Musa textilis* that yields Manila hemp were obtained through the kind services of Dr. Nicholls, of Dominica. All three have grown and have yielded other suckers since they have been here. A stock for experimental cultivation will in the course of time be obtained by division in this way. This is a very important plant, for of all fibers Manila hemp is one of the most, probably the most, largely employed. The plants require the same treatment in cultivation as bananas or plantains, and land on which the latter will thrive is best adapted for them.

Internal duties in Peru.—Consul Brent writes November 28, 1887:

Congress has passed a law, which has been promulgated by the President, establishing the following internal imposts on liquors and wines of foreign and native manufacture:

	Cents per liter.
Native brandy and rum under 21 degrees proof	2
Native brandy and rum over 21 degrees proof	5
Native brandy and rum over 31 degrees proof	10
Whisky and other imported alcoholic liquors	4
Champagne and other sparkling wines	10
Burgundy, claret, madeira, sherry, and other generous wines	6
All native wines of any class	1
Imported beer	2
Native beer	1

It is estimated that from these taxes an addition of 1,000,000 of silver soles ($727,000) will be obtained for the national revenue.

Immigration into Venezuela.—Consul Bird transmits to the Department the following translation of a contract entered into by the Venezuelan Government:

General Guzman Blanco, envoy extraordinary and minister plenipotentiary of the United States of Venezuela for France and other countries of Europe, in the name and by authority of the Government he represents, and General Francis Frederick Millen, a citizen of the United States of America, in his own behalf, have agreed to the following contract:

ARTICLE 1. General Millen promises to carry to Venezuela, either by himself or by means of his agents, a foreign immigration as large as possible.

ART. 2. The immigrants must go to Venezuela in a state of perfect health; they must neither be attacked by organic nor contagious disease nor suffer from any infirmity. They must also carry passports gratuitiously issued by the consul of Venezuela at the port of embarkation, in which passport he will have them to sign a note stating that they understand and accept the conditions of this contract.

ART. 3. The immigrants will be citizens of the Republic on their arrival in Venezuela, but will be exempt from all military service for the term of ten years, except that in case of armed invasion of Venezuela or of international war, all able-bodied immigrants may be called to bear arms according to the local laws.

ART. 4. The immigrants shall not have the right to leave Venezuela until they shall have remained there at least two years.

ART. 5. General Millen or his agents must previously arrange with the Government before each expedition of immigrants in reference to the number of individuals composing the expedition.

ART. 6. The Government will pay the following passage money for immigrants, to wit: 120 bolivars for each adult person over fifteen and up to fifty years of age; 70 bolivars for each person over eight and up to fifteen years of age; 2 bolivars for each person over six and up to eight years of age; nothing for those over fifty and those under six years of age.

ART. 7. The immigrants, on their arrival at Laguayra, will be received by the immigration committee, which will notify the minister of fomento of the number that may have arrived, who will thereupon direct the payment of passage money to General Milen or his agents.

ART. 8. The expenses of disembarkation of the immigrants in Venezuela, their residence in Laguayra, and transportation to their destination will be for account of the Government.

ART. 9. Each immigrant will have the right to introduce into Venezuela, free of duty, his personal effects, household furniture, provisions, seed, and the implements of his trade or profession, together with those of his family that come with him.

ART. 10. The said immigrants will be assigned to the colonial districts designated or to be designated in Venezuela; they must repair thither and remain subject to the regulations established in relation thereto.

ART. 11. Those immigrants who, on their arrival in Venezuela, desire to engage to service at any particular point in the Republic, and find persons with whom to contract, will have the right to do so.

ART. 12. The Government will gratuitously grant to each person of age a title to six hectares of arable land in the respective colonial district, a straw-thatched cabin, and farming implements to those who have none. The colonists will be at liberty to cultivate whatever amount of land they may desire; and those who, during the first year, may have cultivated all their land will be granted other land in equal amount to that cultivated, and with the definite title of property to all the lands that may have been granted them.

ART. 13. During one year after their arrival at the colony the Government will give to the immigrants for their daily maintenance* the following sums: 2 bolivars for each adult person from 15 to 50 years of age; 1 bolivar for each person from 6 to 14 years of age; nothing for those under 6 and over 50 years of age.

ART. 14. The colonists that at the end of the year shall have cultivated the lands granted them will have nothing to pay for expenses of passsage and maintenance; but those who have not cultivated their lands may be obliged to pay all the expenses they have caused, unless they may have failed to do so through the act of God or the public enemy. For the purpose of repayment of expenses incurred on account of the colonists the lands are valued at the rate of 100 bolivars per hectare and the cabin at the rate of 50 bolivars.

* The word *manutencion* in the original, as generally accepted in Venezuela, signifies *daily maintenance.*

ART. 15. General Millen shall be responsible to the Government of Venezuela for the proper treatment of the immigrants while they may be under the care of himself or his agents.

ART. 16. immigrants shall not be obliged to select their lands contiguous to each other, but may locate anywhere, so that it be within the limits of the colony.

ART. 17. The duration of this contract shall be for the term of four years, to date from the arrival of the first expedition to the Venezuelan shores, and may be extended four years.

ART. 18. All sums collected from the immigrants by the contractor, in the form of agent's commissions, advances, or extras in passage money will not be for account of the Government, but must be verified and certified by the consul of Venezula at the port of embarkation.

ART. 19. All doubts and controversies that may arise under this contract shall be settled by the tribunals of the Republic in conformity with the laws.

Executed in triplicate in Paris, the 13th day of October, 1887.

F. F. MILLEN.
GUZMAN BLANCO.

Bonded warehouses in China.—Minister Denby writes from Peking, October 26, 1887:

The Imperial Government has adopted the bonded warehouse system, as it prevails in Western countries. An American citizen, Mr. H. B. Morse, an employé of the Imperial maritime customs, was lately sent to the United States to study the system. He thoroughly investigated the bonded warehouses in New York. He will now be put at the head of the system at Shanghai.

The tariff is so low that the advantages to trade are very great. Since the introduction of the telegraph the old system of keeping large stocks on hand has been abandoned. Prompt and current selling is now the rule.

It is supposed that the bonded system will benefit the China Merchants' Company, whose warehouse will be bonded, thus giving them the price of storage.

UNITED STATES CONSULAR REPORTS.

BUDGETS

AND

BUDGET LEGISLATION

IN

FOREIGN COUNTRIES.

No. 90.—MARCH, 1888.

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REPORTS

ON

BUDGETS AND BUDGET LEGISLATION.

No. 90.—March, 1888.

BELGIUM.

REPORT OF MINISTER TREE.

By the terms of article 115 of the Constitution of Belgium the budget of the state is voted each year by the Legislative Chambers, and all the expenses should be therein contained.

It is the duty of the Government to present the budget to the Chamber of Representatives at least ten months before the opening of the financial year, which begins the 1st of January and ends the 31st of December of the same year.

I am informed that this disposition has been introduced in the law in order to give to the Chambers sufficient time to estimate properly the demands for appropriations which have been made on them, and it is besides considered that a bill as extended as that of the general budget, which embraces all of the services of the governmental administration, should be put at the disposition of the representatives of the nation some months before its discussion in the sections.

The general budget is divided into as many special budgets as there are ministerial departments:

There are the budgets of the ministers of justice, foreign affairs; finance; war; railroads, posts and telegraph; the interior and of public instruction; and agriculture, industry, and public works.

Each minister prepares his special budget for the needs of his service. All of the budgets are afterwards arranged by the minister of finance, who is charged with the duty of presenting them to the Chamber of Representatives.

A royal decree of the 19th of February, 1848, regulates among other things the form of the budgets, conformably to the terms of this decree. The bill fixing the budget of the expenses of each department is accompanied by two tables; one of which gives by article the sum total of the appropriation asked; the other develops each article item by item, and gives any subdivisions judged useful to enlighten the Chambers in appreciating the appropriations asked.

Explanatory annexes are added when the nature of the service requires it.

The projects of the budgets and the developments present the estimates of expenses by branch of service; thus the expenses of the personnel can not be confounded under the same article with the expenses relative to material.

In this manner an obstacle, it is thought, is interposed to the power of the Government to dispose of appropriations destined for materials in order to increase salaries; and it also permits a better appreciation of the administrative management at the time of the discussion of the bill.*

The projects of budgets and the papers relating thereto, like all other propositions for the adoption of laws addressed to the Chamber of Representatives, are printed, distributed, and transmitted to the sections to be discussed there, following the form established by the rule of the chamber.

Each year, at the opening of the legislative session, the body of the representatives is divided into six sections. Each section examines the budgets. It then names a reporter. The reporters of sections are assembled in what is termed a central section by the president, or one of the vice-presidents, who presides over their deliberations. The central section appoints one of its number to make the report to the Chamber.

The report of the central section is printed and distributed in time to permit the members of the Chamber to take cognizance of its contents before the discussion in the chamber.

The discussion in full session which follows the report of the central section first bears on the budget taken altogether, and afterwards is directed on each article, pursuing its order.

Each budget is examined and discussed first in the sections, and then in the general session of the Chamber, and in this way it comes to be explained.

The budgets, after being voted by the Chamber of Representatives, are then transmitted to the Senate, where they are first examined and discussed by a commission *ad hoc* selected from the body of the Senate.

This commission, designated by the name of commission of finance, charges one of its members to present the report to the Senate. The discussion thereafter proceeds in full session in the same manner as has been above described with reference to the Chamber of Representatives.

It has already been explained that the projects of budgets of expenses should be presented by the Government in the form determined by a royal decree of the 19th of February, 1848, and that the estimates of expenses are shown there by branch of service in a uniform manner.

It has been also explained that the budgets of the different ministerial departments, which constitute the general budget of the state, are examined and discussed in detail by the Chamber of Representa-

* I send by this mail, under separate cover, as specimens, the projects of budgets of the ministry of finance and of the ministry of the interior for 1876, deposited with those of other departments, and the budget of the "ways and means," rendered at the session of the Chamber of Representatives of the 25th of February, 1875. These documents are too bulky to attach hereto, but they may be considered as an annex to this dispatch, and I will accordingly so mark them. They will give a good idea of the form of the budget as well as of the resources depended upon to meet the expenses of government.

tives and the Senate in the form in which they are presented to the two legislative assemblies.

When the discussion of the budgets in sections gives rise to propositions of reduction or increase of the appropriations asked or of any other nature, the central section examines these propositions, and submits to the Government any observations that it deems proper.

The report mentions the proportions of the sections and the observations and conclusions of the central section; it makes known moreover the responses which the Government has made thereto. Both the one and the other are examined and discussed in general session.

It happens sometimes that the propositions of the sections are adopted by the Chamber and the budget amended so as to conform to these propositions. The Chamber itself sometimes reduces or increases, of its own motion, certain allowances in the projects of budgets.

The budgets must be adopted by the legislature before the 1st of January, in order to permit of the collection of taxes for the ensuing financial year.

Every demand for an appropriation made outside of the law with reference to the budgets is submitted to the same preventive control as that of the budgets.

Article 16 of the law concerning accounts forbids ministers making any expense beyond credits opened to each of them by the appropriations. Neither can they extend by any private expedient the amount of the appropriations granted for their respective services.

It is scarcely necessary to say that the sections of the Chambers of Representatives and the commission of the Senate enjoy the most complete independence in the examination and discussion of the projects of the budgets.

It would seem to be difficult to establish a preventive control more severe than that of which the general features and essential points have been herein indicated.

It may be easily seen from what has been already, said that all propositions with reference to expenses on account of the state are submitted to the most minute examination on the part of the legislature, and that it only gives its approbation to these propositions when the necessity of the expenses is sufficiently demonstrated to it.

It may also be observed that an experience of nearly fifty years has not, I am informed, developed any serious inconvenience in this system of control, and that no abuse has been stated therein up to the present.

On the other hand, it appears from statistics published by the Government, as to the general expenses of the state, that those which are incident more especially to the various services increase each year relatively but little, and are notably inferior to the enlargement of the products of imposts.

All of the ministers have seats in the Chamber of Representatives, and may participate in the discussion of their respective budgets, and this whether they are members of the Chamber or not, but they have no vote unless they are members.

All bills appropriating money must originate in the Chamber of Representatives.

The constitution establishes a "cour des comptes," which is charged with the duty of the examination and liquidation of the accounts of the general administration of the Government, and no account can

be ordered paid by the department of finance until it has received on its face the sanction of this court. The accounts are examined in connection with the budgets. The court is composed of seven members, who are elected by the chamber of representatives for the term of six years. They are entirely independent of the King and of the ministers. They are forbidden to have any other business, to be directors in any corporation or interested in any institutions of a commercial or industrial nature. The court is required to make a report from time to time to the chamber of representatives, with a general account of the financial administation of the nation.

No impost for the benefit of the state can be established except for one year.

The Government derives its revenues from—

(1) Taxes on land.
(2) Personal taxes.
(3) Taxes on the profits of manufacturing establishments.
(4) Royalties on the working of mines.
(5) Customs duties.
(6) Excise dues.
(7) Tolls; (*a*) Rivers and canals; (*b*) railroads; (*c*) telegraphs; (*d*) posts.
(8) Registrations.
(9) Successions to estates.
(10) Prisons.
(11) Stamps.
(12) Divers minor sources.

No loan can be contracted except by virtue of a law.

The national bank is the cashier of the Government. Its moneys are deposited with the bank, which pays its *mandates* (warrants). The bank also allows the Government interest on its balance. In case of the need of temporary credits in the course of financial administration, there is a law which allows the Government, under certain very strict limitations, to issue "bons" (treasury notes) or vouchers drawing interest, which, however, must be redeemed within a period which can not exceed five years. The money on these "bons" is advanced by the national bank.

LAMBERT TREE,
Minister.

LEGATION OF THE UNITED STATES,
Brussels, November 23, 1887.

DENMARK.

REPORT OF MINISTER ANDERSON.

I applied to the royal Danish minister of foreign affairs and asked him to have the goodness to furnish me with a succinct and authoritative presentation of the subject. The minister of foreign affairs sent my note to the minister of finance (Prime Minister J. B. Estrup) and the latter prepared in Danish an article on the subject, a translation of which I herewith transmit. It describes the annual budget from its inception to its completion, and I trust it will be found entirely satisfactory. I may add that in 1885, 1886, and 1887, the Rigsdag has failed to pass a budget, and the King and ministry have, as I have heretofore reported, issued provisional budgets, but they have not been impeached according to section 69 of the Danish constitution.

The documents referred to in Mr. Estrup's article as illustrating the statements therein made I send you under another cover, they being too voluminous to inclose with this dispatch.

R. B. ANDERSON,
Minister.

LEGATION OF THE UNITED STATES,
Copenhagen, July 12, 1887.

[Translation.]

OFFICE OF THE MINISTER OF FINANCE,
Copenhagen, June 11, 1887.

With reference to the copy of a note forwarded with the minister of foreign affairs' note of the 21st ultimo, in which the United States of America's minister resident in this city, acting upon instructions from his Government, makes application to be furnished with a description of the different steps through which the annual budget passes from its inception to its appearance in the form of a law, I take pleasure in replying as follows:

After the several ministers have collected their contributions to the budget, these are sent to the ministry of finance, where, after being critically examined, they are, together with that department's report, worked into the form of a budget, which, according to section 48 of the constitution, must contain a review of the Government's prospective receipts and disbursements for the following year (from April 1 to March 31, inclusive), and must be presented in a form suitable for presentation as a bill. The budget must, in accordance with section 16 of the constitution—according to which all laws and weighty government measures are discussed in the cabinet—be laid before that body and receive the King's sanction to its presentation to the Rigsdag.

Pursuant to the provisions of section 48 of the constitution, which decrees that the budget for the following fiscal year shall be laid before the Rigsdag at every regular session immediately after that body has assembled, the minister of finance, immediately upon the assembling of the Rigsdag (generally the first Monday in October—see section 41 of the constitution), announces his intention of presenting the budget bill as approved by the King in the Folkething, or Lower House, that being the body which, pursuant to section 48 of the constitution, shall first consider that document. Immediately after the Folkething has been organized the budget is laid before it by the finance minister, and copies of the document (the budget itself, together with the necessary explanatory notes) are distributed among the members of both houses.

The budget itself, which, as above stated, contains a statement of the Government's prospective revenues and disbursements, is divided into two principal parts (or chapters), viz, revenues (Chap. I) and disbursements (Chap. II), both parts being again divided into paragraphs—sections 1 to 10, revenues; and sections 11 to 28, disbursements.

As the budget is simply an estimate, and, moreover, has reference only to one year, there can not be included in its provisions ordinary or regular disbursements which extend beyond the single fiscal year. For such disbursements special laws are required.

Thus by no provision of the budget can a new tax be levied, or any alteration or stopping of those at the time existing be authorized. Under its authority no government loan can be negotiated nor any of the state domains transferred, these being only possible under special laws (section 47 of the constitution). In other words, the budget has as a basis the ordinary institutions of the government, but can never alter those institutions.

As the accompanying copy of the budget is expected to furnish sufficient illustration regarding the form and arrangements of matter, we will only point out here that each chapters' first paragraph, sections 1 and 11, contain a total estimate of the receipts and disbursements; that sections 2 to 9 and 12 to 26 treat respectively of the itemized revenues and disbursements, while in paragraph 10, revenues, and section 27, disbursements, are treated respectively; in section 10 revenues accruing from sale of property and new loans, and in section 27 disbursements for purchase of property and payment of debts; furthermore, section 28 contains those items which the Government will be authorized to disburse in case the necessary legislation occurs during the session of the Rigsdag.

After the budget, as above stated, has been introduced by the minister of finance into the Folkething, the chairman of that body fixes a day for its first reading, usually one week after its presentation, and at which time the bill is discussed in its entirety.

After the first reading a time is fixed for the second by a vote of the house, and a committee is usually appointed, whose business it shall be to examine singly the clauses of the bill and such items as may have been handed in by the ministers since the presentation of the budget and to recommend such amendments as seem proper.

The result of the finance committee's work appears in the form of a report regarding the budget and its supplementary items as presented by the Government, together with amendments recommended by the committee as a whole, by a part or parts, or by single members thereof, as well as any amendments that may be proposed by the ministers themselves.

At the second reading of the bill are discussed its single paragraphs, together with the amendments proposed by the ministers, by the committee, or by members of the Folkething outside of the committee. The paragraphs are discussed in the order of their succession, usually the chapter on disbursements taking precedence of that on revenue.

Immediately after the reading of each section a vote is taken regarding it and amendments as proposed, and at last it is decided by vote whether the bill in its present form shall go over to a third reading.

Upon the third reading, during which amendments can only be proposed by the committee, a majority or minority of the same, by the ministers, or by fifteen members of the Folkething in unison, the amendments, the paragraphs to which they refer, and the budget as a whole are brought to a vote. At this point the budget is brought to a vote in its entirety, and upon being passed by the Folkething the chairman of that body sends it to the chairman (speaker) of the Landsthing or upper house, to be laid before that branch of the Rigsdag.

The Landsthing, which in every particular has the same rights in treating the budget as the Folkething—the right of the latter to first discuss it being alone excepted—submits it to three readings, just as the Folkething, and for which readings the same rules hold valid as in that body.

In case the Landsthing at its third reading of the bill passes it in the form received from the Folkething the work of the Rigsdag in reference to the budget is ended. In the opposite case the bill goes back to the Folkething, whose chairman immediately sends it to the committee on finance, after which it, together with the Landsthing's committee's report, and any amendments which may have been passed concerning it, are taken into consideration in the Folkething. In case it passes this body in its new form, as presented by the Landsthing, the Rigsdag's work in regard to the budget is ended; but in the opposite case, the amended bill is again sent to the Landsthing, where it is treated in the same way as in the Folkething's last discussion.

When, upon this the fourth reading of the bill in the Landsthing, no agreement is reached between the houses, the question arises as to whether the Landsthing will demand that each house shall appoint an equal number of its members for the formation of a joint committee, which shall submit a report upon the disagreement. In case it is decided to appoint such committee, the number of its members is fixed upon and the result announced to the chairman of the Folkething. Thereupon each body appoints by vote those of its members who are to constitute the committee; the committee reports upon the disagreement, at the same time making its recommendations to the different houses. Pursuant to this report a final conclusion is reached in each house for itself; and should no agreement be reached in this way, the budget has been defeated. The possibility, however, of the passage of a regular budget is not excluded by such a failure, since, providing there be sufficient time, a new budget can be presented, which is then treated in the same way as the original.

In the event of an agreement between the two houses of the Rigsdag after the usual three readings of the bill in each or at any later period, it is sent as passed, by the chairman of that house in which it was last passed, to the Government, and upon being sanctioned by the King when laid before the cabinet it becomes the finance law for the year, and is proclaimed in the usual manner, by being published in the official "Lovtidende."

The finance law as passed by the Rigsdag and sanctioned by the King thus becomes the basis for the financial management of the state during the following fiscal year.

New conditions may arise which occasion expenses for the Government not included in the regular budget granted by the Rigsdag. As a supplement to the budget, therefore, we have an auxiliary appropriations bill, touching the treatment

of which in the Rigsdag section 48 of the constitution makes the same provisions as for the treatment of the budget, viz, that it shall be first introduced in the Folkething. In this bill are included partly appropriations which have been granted by former financial laws but which it was found impossible to use during that year for which they were granted and are now desired for use (so-called renewed appropriations), and partly such items as have become necessary after the passage of the budget (new appropriations). Occasions, moreover, may arise when it would be deemed unwarrantable to await the time when this auxiliary bill shall be acted upon before these extra disbursements shall be met. In such cases the extra expenses may be defrayed by the ministers acting upon their own responsibility, but assuming always that their actions will be sanctioned by the Rigsdag in its passage of the auxiliary bill (the so-called additional appropriations).

The position of the Rigsdag in regard to these additional appropriations may be one of the following: Either by including them in the auxiliary bill and passing the whole it sanctions them, or it postpones action until the time when the Government accounts for the fiscal year concerned shall be laid before it for its sanction, unless the Folkething (according to sections 68 and 69 of the constitution, resolves before that time to call the ministers to account before the "Rigsret" (the court of impeachment.)

At the close of the fiscal year the minister of finance lays a statement of the revenues and disbursements of the state during that year before the King in his cabinet, after which it is published.

This statement is then sent to the Rigsdag, whose two houses, each for itself, appoints from among the Rigsdag's members, or from outside that body, two salaried auditors, who go critically through the document, and return it, together with their report, to the Rigsdag, where, after being discussed, a conclusion is reached in each house by itself as to the acceptance of the statement as a whole, or with the exception of single items, in which latter case the question is involved as to whether the Folkething will exercise its right of calling the proper ministers to account before the court of impeachment (as granted by section 69 of the constitution).

A statement of Government accounts, together with the report on the same submitted by the auditors, as also a volume containing, among other things, the constitution and the order of business in the two houses of the Rigsdag, accompanies this note.

B. ESTRUP.

FRANCE.

REPORT OF MR. VIGNAUD.

I.—PRELIMINARY REMARKS.

What is called generally in France the budget is styled officially the "law fixing the revenue and the expenditures for the year." This law is voted annually, and as the fiscal year corresponds in France with the calendar year, it is presented at the beginning of the session held the year preceding.

The budget embraces all the revenue as well as all the expenditure of the Government. Certain taxes may be established in a permanent form or for a stated number of years, but the collection of each tax must be authorized every year by the law fixing the budget. Should the Chamber adjourn without voting the budget, not only no expenditure could be made but no taxes could be collected. It has happened that the year has expired before the Chambers were ready to vote the budget. In that case, to prevent the machinery of the Government from being blocked, the Chambers vote what is called in French "*un douzième provisoire*," that is to say, a temporary budget for one month, calculated upon the figures of the preceding budget.

The French budget therefore contains two distinct parts or features, which are, however, quite intermixed in their details—the budget of

revenue and the budget of expenditure forming usually one single law; this year it is presented in two bills blended together.

II.—PREPARATION OF THE ESTIMATES OF REVENUE.

The minister of finances is intrusted with that care. He prepares elaborate estimates of all and of each of the sources of revenue of the country. He states what they have brought the preceding year, what changes new legislation has made in them, and what they are likely to bring. He finally sums up the results he has obtained in different schedules, according to the nature of the things, and submits with each one the necessary explanations.

The revenues of the French Government are derived principally from six different sources, viz:

(1) Direct taxes, yielding in round figures from 450,000,000 to 500,000,000 of francs; they comprise—

A. The land tax, which is divided in taxes on lands with buildings and taxes on land without buildings.

B. The personal tax, which is due by every male inhabitant of France, and is equivalent to three days' work.

C. The movable contribution or tax on the rent paid. It is a tax of 1 per cent. on the income of each individual, as indicated by the rent he pays.

D. Taxes on doors and windows, which are paid by every tenant or proprietor in proportion to the number of doors and windows of the apartment or house he occupies.

E. Taxes on carriages, on billiards, clubs, etc.

F. Licenses.

(2) The stamp duty and the duty on the registration of all acts and deeds, which yields about 700,000,000 of francs.

(3) The import duty which gives nearly 350,000,000.

(4 The taxes on objects of consumption, wine, liquors, beer, cider, sugar, etc., about 800,000,000.

(5) The monopolies held by the state: Tobacco, matches, gunpowder, etc., over 400,000,000.

(6) The posts telegraphs, over 170,000,000.

(7) The public domain, from 40,000,000 to 50,000,000.

There are other minor sources of revenue, such as Algeria, the national printing office, the official journal, the state railways, etc.

In the budget now pending before the Chambers the total revenue of the Government for 1888 is presumed to amount to 3,253,583,183 francs.

III.—PREPARATION OF THE ESTIMATES OF EXPENDITURE.

Each of the departments of Government prepares its own estimates of expenditures, which are based on the appropriations of the preceding year and the necessities which may have arisen since. When each cabinet officer has agreed upon the expenses required for the working of his department he sends his estimates to the minister of finance.

IV.—THE BUDGET BEFORE THE CABINET.

The minister of finance having collected all the estimates of the different departments of the Government, his own comprised, lays them with his comments and explanations before his colleagues, and they are discussed in cabinet meeting under the presidency of the President of the Republic.

When the budget is agreed upon it takes the shape of a bill and is ready to be introduced in the Chamber.

V.—PRESENTING THE BUDGET.

Like all other laws originating with the Government, the budget is preceded by a statement or argument, called in French "Exposé des motifs," explaining its object, and by a decree of the President directing that it be presented to the legislature. In this case the decree is countersigned by the minister of finances, who introduces the bill.

In accordance with article 8 of the constitutional law of February 24, 1875, which states that all financial legislation shall originate with the Chamber of Deputies, the budget must be introduced in the Lower House and passed there before it goes to the Senate. Unlike the United States Senate, whose constitutional inability in financial matters is confined to revenue bills, the French Senate can originate no financial measure, whether it refers to revenue or to expenditure.

The budget as introduced by the minister of finance forms a bulky blue book.

This year it makes three quarto volumes, the first one of which contains the statement above referred to, a summary of the preceding budget, and a series of tabular statements or schedules, preceded each by explanations and remarks. The other two volumes are divided into twelve separate appendixes, one for each of the departments of the Government.

The following table will show how these departments are divided and the amount asked for this year for running each branch of the Government.

VI.—PRESUMED EXPENDITURES.

Tabular statement of the presumed expenditures of the French Government for the year 1888.

Object of expenditure.	Details.	Total.
	Francs.	*Francs.*
Public debt: Rentes and securities		1,337,275,671
Public powers: President, senate, and chamber		13,257,300
Cost of collecting the revenue, viz:		
Direct and indirect taxes	185,138,211	
Fees from the foreign office	60,000	
Posts and telegraphs	131,324,328	
Forests	16,080,208	332,602,737
Reimbursement of certain special funds		20,555,340
Department of finances		16,856,605
justice		37,369,901
Foreign office:		
General budget	13,678,600	
Protectorates	30,626,300	44,304,900
Interior:		
General budget	71,583,259	
Algeria	7,509,375	
Department of public worship	45,743,563	124,786,197
War		694,934,580
Marine:		
General budget	219,883,311	
Colonies	41,841,331	261,721,642
Public education		133,048,190
Fine arts		12,065,505
Commerce and industry		22,270,028
Agriculture		23,473,470
Public works		175,981,604
Posts and telegraphs		1,998,058
		3,253,104,738

VII.—REFERRED TO A COMMITTEE.

The budget having been laid before the president of the Chambers it is ordered to be printed and distributed.

All the bills introduced in the French Chamber are referred to the eleven bureaus in which the whole Chamber divides itself each month. After having examined summarily these bills, each bureau elects by ballot one, two, or three of its members, according to the importance of the bill, to examine it thoroughly and report to the Chamber. The members or commissioners thus appointed form the special committees of the Chamber. The committee on the budget is always composed of thirty-three members; that is to say, three for each bureau.

This committee is usually appointed eight days after the projected budget has been printed and distributed. It selects its own chairman and secretary and divides itself into subcommittees, each one having in charge a special branch of the budget. When the labors of the committee are through it designates a general reporter and special reporters. The general reporter makes known to the Chamber the conclusions arrived at by the committee; he explains, and if need be defends, its action with reference to general matters or principles, and particularly with reference to questions and measures affecting the revenue, The special reporters deal only with certain branches of expenditure.

VIII.—POWERS OF THE COMMITTEE ON THE BUDGET.

The committee on the budget is the most important of the committees of the Chamber. It has extensive powers; it corresponds directly with the cabinet officers, as well as with the heads of bureaus in each department; it can call for written explanations from the Government, and for vouchers; it can summon witnesses, and may require the personal attendance of any of the members of the Government.

The action of this committee is not limited to the budget itself, which embraces, as explained above, both revenue and expenditures, ways and means, and appropriations. All applications for supplementary or extraordinary credits, all the bills introduced in the house, either by the Government or by individual members, the object of which is to modify the revenue or the expenditures, and also that part of any other bill which involves fresh expenditures or new taxes, or an increase of the taxes existing, or of the expenditures already provided for, must be referred to that committee.

The committee on the budget, if sustained by the Chamber, can refuse all supplies to the Government until it yields to its demands, or until the President changes his cabinet. In 1877 it did so in a conspicuous manner. The Chamber of Deputies was not then in harmony with the cabinet, and the President had asked the Senate to consent to its dissolution. The committee on the budget declared that in the meantime it would not take the budget into consideration, and it was sustained by the Chambers. The dissolution was pronounced, and a new Chamber elected, but it was as hostile to the cabinet as the former, and the new committee on the budget reported, through Mr. Jules Ferry, that it would furnish no supplies to the Government until it had formed a true parliamentary cabinet, one which might give security to the country and inspire confidence to its representatives. The cabinet had to resign.

Extensive as its powers are, the committee seldom attempts to take the initiative of making important retrenchments or additions to the budget presented by the Government. Occasionally it has

done so, but usually it adheres strictly to the fundamental principle of parliamentary government which leaves to the executive the responsibility of proposing the measures necessary for the administration of the country, and reserves to the legislature the right and duty of approving or of rejecting and of giving general directions. Such has been the line of action of the committee in the recent crisis which caused the resignation of the Goblet cabinet. The chambers had indicated that it desired retrenchments, and the cabinet had presented a budget which, as it thought, complied with this desire. The committee, on the contrary, thought the retrenchment was not sufficient, and insisted upon having more. The Government said it could not make any more without damaging the efficiency of the public service, but that it was ready to accept all the retrenchment the committee would point out. The committee declined to do so, on the ground that it was the function of the Government and not of the committee to frame the budget. The Government, it said, is to govern, and the legislature to legislate. The preparation of the budget is nothing else but the organization of the forces and instruments by means of which the country is to be governed; and without intruding upon the attributes of the executive, the committee on the budget cannot substitute itself for the Government, which has the duty of selecting and of applying the measures necessary for the execution of the policy dictated by the legislature.

Upon that issue the committee and the Government came before the chamber. The committee was sustained and its chairman was charged with forming a new cabinet more in accordance with the chamber.

IX.—DEBATING AND VOTING THE BUDGET.

When the committee on the budget has performed its task it reports to the chamber. Usually there is but one general report accompanying the budget as fixed by the committee. Occasionally there are special reports on certain parts of the budget.

After the report is read, printed, and distributed a day is fixed for public debate, which is at first general and then special. The general and special reporters of the committee speak for the committee. The Government, if it does not accept the budget as reported, makes its objections through the members of the cabinet or through special commissioners designated by decree to that effect. Each chapter of the budget is debated and then voted upon separately. Any member of the chamber can propose amendments, and unless these amendments have a special importance they are disposed of at once; otherwise they are referred to the committee, which reports the next day. The budget and all financial bills are passed after one reading.

X.—THE BUDGET BEFORE THE SENATE.

After the budget is voted by the chamber, a new decree of the president directs its submission to the Senate, where it is referred to the committee on finances of that body, which is a standing committee composed of eighteen members appointed at the beginning of the session by the bureaus, like the committee of the chambers.

It is agreed now that the Senate has the right to amend the budget as voted by the Chamber, in any sense it pleases, by adding a retrenching revenue and expenditures, but such was not originally the under-

standing of the Chamber. Article 8 of the constitutional law of February 24, 1875, provides that the Senate has, concurrently with the Chamber, the initiative and the confection of the laws, but that the "financial laws" must be first introduced in the Chamber and passed by it. When the first budget framed under this law came before the Senate that body re-established in it the credits demanded by the Government which had been suppressed by the Chamber. With these amendments the budget returned to the Chamber, where the committee on the budget denounced the action of the Senate as unconstitutional. M. Gambetta contended that the Senate could not add any expenditure to the budget because the constitution deprived it of taking any initiative in financial matters. The debate, however, clearly established that the language of the constitution simply meant that financial bills must originate in the chamber, and this view has not since been contested. But the moral right of the Senate to make any alteration in the budget, as voted by the Chamber, is still questioned by many radical deputies who consider the interference of the Senate in this matter as unjustifiable. The Senate yields to a certain extent to this pressure, for it seldom uses its constitutional privilege.

XI.—THE BUDGET BEFORE THE PRESIDENT.

After the budget is framed by the two chambers the President, if he finds it unsatisfactory, may ask that it be submitted to a new debate. This application must be made within a certain time in a message explaining why it is made, and it can not be refused. A committee is at once appointed to report on the message, and twenty-four hours after that report is read the new debate takes place.

The vote this time is final, and the budget must be promulgated.

XII.—PROMULGATING THE BUDGET.

The budget having been finally passed, the President promulgates it within three days, if the chambers have decided by a special vote that there is urgency; if not, the promulgation takes place within a month in the form of a decree, signed by the President and countersigned by the minister of finance. The budget becomes legally binding at Paris one day after its publication in the Journal Officiel, and in the departments one day after the Journal is received.

XIII.—DEFICIENCY BILLS AND EXTRAORDINARY CREDITS.

When in the course of the year an expenditure becomes necessary which has not been provided for in the budget, the Government introduces a bill to open a supplementary credit to the account of a stated chapter of the budget.

If the expenditure can not be attached to any existing chapter it calls for an extraordinary appropriation, for which a new chapter is necessary in the budget. These bills are also referred to the committee on the budget. If the chambers are not in session the Government, in case of emergency, has the right to open the needed credit by a decree; but at the beginning of the following session a bill must be introduced to ratify this action, and until this ratification is obtained the minister who has employed the money is personally responsible.

XIV.—CLOSING THE BUDGET.

At the end of each year the President, upon the proposition of the minister of finance, appoints a special committee, charged with closing, on December 31, the journal and public ledger.

The accounts of a given year as opened by the budget is considered closed only at the end of the second following year. Sometime later the minister of finance prepares a bill for settling definitely the budget of that year. This bill is accompanied by vouchers furnished by each head of department, and by the report from the court of accounts certifying that the expenditures and receipts have been made in accordance with the law. The bill is referred to a special committee of thirty-three members, who examine carefully the papers submitted for their consideration and ask for explanations when they are needed.

The Government is to account for all the money collected and for all the money expended. It is not authorized to use money appropriated under one chapter for matters embraced in another chapter; but it may change the distribution of the amount allowed for items mentioned within the same chapter. It may, for instance, increase or reduce the salary of certain officers named in one chapter, provided the total amount remains the same. The heads of departments occasionally avail themselves of this right, but they are expected to explain their action to a committee.

When the committee is through with its examination it reports accordingly. If there is a deficiency in the revenue it is charged to the floating debt; if there is an excess it is appropriated to previous deficiencies, or is carried to the treasury. This closing bill is voted in the same form as the budget, and also so promulgated. This last act ends the operation of the budget.

HENRY VIGNAUD.

UNITED STATES LEGATION,
Paris, June 4, 1887.

GERMANY.*

REPORT OF MR. CROSBY.

THE IMPERIAL GERMAN BUDGET.

According to article 69 of the constitution, the revenues and expenditures of the Empire for each year must be estimated and placed upon the budget. This budget is regulated by a law called the "budget law," passed before the beginning of the fiscal year by the concurrent majorities of the Bundesrath and Reichstag. The fiscal year extends from April 1 to March 31, both days, inclusive.

The imperial ministry, *i. e.*, the chancellor, lays the appropriation bill, with the schedule of appropriation, first before the Bundesrath. When they have both been considered and adopted by that body, and have received the approval of the Emperor, they are laid in his name before the Reichstag for its "constitutional approval." The

*I send herewith a memorandum, on the Imperial Budget, handed me by Mr. Crosby, the second secretary of this legation, to whom I had confided its preparation. His chief difficulty lay in the fact that the methods of framing the estimates of the necessary appropriations are not to be found in books, but in the traditions and practices of the departments, and vary with the accession of each strong, self-reliant minister.

GEORGE H. PENDLETON.

LEGATION OF THE UNITED STATES,
Berlin, July 5, 1887.

Reichstag then enters upon their consideration according to the regular provisions for the order of business, the bills being subjected to a first, second, and third consideration or reading.

At the first reading the consideration is general, and the discussion is confined to the expression of general views on the financial condition of the Empire. In this first reading it is decided what chapters and titles of the budget shall be referred to a committee (the budget commission) for a thorough examination before a second reading in a full house. All the chapters and titles not selected with this view are referred without further delay for special discussion in the whole house (second reading). The third reading follows after the appropriations have been subjected, in the second reading, to special discussion from beginning to end, and have been adopted in proper form by a majority of the Reichstag. A general discussion again precedes the third reading, when the individual chapters and titles are adopted in their order.

After the conclusion of the readings in the Reichstag, the appropriation bills and the schedules of appropriations are communicated by the president of the Reichstag to the chancellor, with the changes adopted,

The chancellor then reports the bills to the Bundesrath in order that that body may give its formal assent, its actual assent having already been given by the commissioners of the Bundesrath who were present at the discussion in the Reichstag. As soon as the assent of the Bundesrath is given, the bills, now adopted by both the legislative bodies of the Empire, are laid before the Emperor for execution "in the name of the Empire, on the approval of the Bundesrath and the Reichstag." By the signature of the Emperor and the counter signature of the chancellor the bills become laws.

As regards its form the appropriation law is divided into the general and several special appropriation laws. In the general or principal law the important amounts of the several chapters and titles appear, and only this general appropriation law is published in the statute book. To this general law belong the special appropriations, which may be considered as supplements. The budget for the year 1887–'88 embraces such special laws or supplements to the number of 19, which bear the following designation :

Supplement.

I.—Appropriation for the Reichstag.
II.—Appropriation for the imperial chancellor and chancery.
III.—Appropriation for the foreign office.
IV.—Appropriation for the imperial department of the interior.
V.—Appropriations for the administration of the imperial army, embracing—
(*a*) The Royal Prussian imperial contingent, and the contingents of the confederated states undertaken by the Prussian administration.
(*b*) The Royal Saxon imperial contingent.
(*c*) The Royal Würtemberg imperial contingent.
VI.—Appropriation for the administration of the imperial navy.
VII.—Appropriation for the administration of justice for the Empire.
VIII.—Appropriation for the imperial treasury.
IX.—Appropriation for the imperial department of railways.
X.—Appropriation for the imperial debt.
XI.—Appropriation for the court of accounts of the German Empire.
XII.—Appropriations for pensions.
XIII.—Appropriations for the imperial army and navy invalid funds.
XIV.—Receipts of the German Empire in taxes.
XV.—Receipts of the German Empire from stamps.

XVI.—Appropriation for the administration of the imperial posts and telegraphs.
XVII.—Appropriation for the imperial printing department.
XVIII.—Appropriation for the administration of railways.
XIX.—Supplement to the domestic budget of 1887-'88, for covering the general expenses by the contributions of the particular states.

The chiefs of the several imperial bureaus must attend to the preparation of these special estimates of appropriations (supplements to the general appropriation bill), each for his own department, and their preparation must be completed by the end of October, for at that date the separate estimates of appropriation must be delivered to the imperial treasury, the chief financial authority of the Empire.

The imperial treasury, which has charge of the general appropriation bill, examines, as regards their form, the special estimates reported to it by the department chiefs, and must see that everywhere in the preparation of the general law the same general principles shall be applied in such wise that the general law, although composed of different parts, shall appear as a single consistent work. The discussions to which the special estimates of appropriations give rise, after being referred to the imperial treasury, are carried on partly by written correspondence and partly by oral explanations between the commissioners of the treasury and the appropriate imperial authorities. As soon as a special bill is so arranged that it is no longer opposed by the treasury, it is laid before the Bundesrath by the chancellor, and that body enters upon its consideration. This order of business recommends itself in the interest of economy of time.

The method by which the preparation of the special appropriation bills is effected is about as follows: The appropriations of the preceding year form the groundwork. In the new bill appear all the expenditures which are fixed by law and adopted by the legal authorities of the imperial administration, as, for example, payment of salaries, additional allowances for rent, appropriations for buildings already authorized, maintenance of buildings, etc., and, besides, those additional expenses which are undoubtedly necessary in the opinion of the several chiefs of the departments. The foregoing additional demands must be thoroughly explained. The expenditures and revenues, the amounts of which are fixed by no law or other obligation and which in each year, according to circumstances, are sometimes larger and sometimes smaller, are determined by taking the average of the last three years of the corresponding items. At the same time, however, attention is paid to the particular circumstances which will probably influence these amounts. As, for example, in estimating the material necessary for the army, oats, straw, etc., the present or probable market price must be taken into consideration.

THE REVENUES OF THE GERMAN EMPIRE.

According to article 70 of the constitution the surplus of the past year, as well as the ordinary receipts from customs, taxes on consumption, and the post and telegraph administration, serves first for the supply of the ordinary expenditures. In so far as the expenditures are not covered by these receipts they must be met by contributions from the separate confederate states, so long as imperial taxes have not been provided for, which contributions, to the extent of the amounts prescribed in the budget, are to be apportioned by the chancellor according to population.

The regular revenues of the Empire consist at present of—

(1) The receipts which flow into the imperial treasury from the customs and taxes on consumption (taxes on tobacco, sugar, salt, spirits, the transit of spirits, malt, and the transit of malt), from the substitutes for customs and taxes on consumption, and from the imperial taxes imposed according to the provisions of the constitution of the Empire, to wit: stamp duties on playing cards and bills of exchange.
(2) The surplus from the post and telegraph administration and the railway administration.
(3) The proportion accruing to the Empire of the net profits of the imperial bank and of the taxes on the bank notes which are not covered by a provision of cash.
(4) To these must be added the several receipts from the bureaus, to wit, interest and increase of capital of the imperial army and navy invalid funds, from the mints (gain by the coinage of the imperial coins and from reminting coins), and interest on the moneys of the Empire which have been laid aside (funds for building imperial forts, fortifications, railways, and the Reichstag palace, etc.).

It is to be remarked that the German Empire in reference to its financial policy has no perfect unity, for only the states of the spirit-tax union (namely, the Empire, exclusive of Bavaria, Würtemberg, and Baden), and only the states of the beer-tax union (namely, the Empire exclusive of Bavaria, Würtemberg, Baden, and Alsace-Lorraine), divide the surplus of the spirit-tax and beer-tax respectively; and further, in the surplus arising from the post and telegraph administration Bavaria and Würtemberg have no share.

The revenue from customs rests upon the tariff imposed by the law of July 5, 1879, and the later supplements and revisions of that law. This tariff suffered an important change by the customs law of May 22, 1885. The purpose of increasing the revenue of the Empire by a high rate of duties on the so-called revenue articles (coffee, petroleum, wine, tobacco, etc.), and at the same time of furnishing the necessary protection for the development of home industry against foreign competition, lay at the foundation of the German customs tariff. Consequently, raw material, existing at home in small or not considerable quantities, and needed for manufactures, is free from duty on its importation. Partly manufactured articles are subjected to moderate duties, whilst fully manufactured goods are taxed with very high duties. In the budget of 1887–'88, the revenue accruing to the Empire from customs duties is estimated at 245,665,000 marks ($58,491,666.66).

The levying of the tobacco tax rests on the law of July 16, 1879. According to its provisions the tax of 45 marks ($10.71) was imposed, to take effect after the year 1882, on each 100 kilograms of tobacco within the taxable territory, worked to a fermented or dried condition proper for being manufactured. This tax is according to weight, except in cases of small tobacco plantings of less than 4 acres, where instead a ground-tax of 4½ pfennigs (about 1 cent) is levied on the square meter. In the budget of 1887–'88, the revenues of the Empire from tobacco cultivated at home are estimated at 8,181,000 marks ($1,947,857.14).

The taxation of sugar manufactured at home depends at present on the law of June 1, 1886. According to its provisions 1.70 marks (about 40 cents) is levied upon each double centner (100 kilograms) of beets prepared for sugar making. An export premium, estimated according to a certain proportion between a centner of raw sugar and the quantum of beets necessary for its production, is granted on all exported sugar. As this proportion has heretofore been too favorable to the sugar producers, the Imperial Government has taken occasion to lay before the Reichstag a new bill for the taxation of sugar.

In the budget of 1887–'88 the revenues of the Empire from the taxation of the domestic beet-sugar are estimated at 35,420,000 marks ($8,480,952.38).

The taxation of salt depends on the agreement of the states of the Customs Union of May 8, 1867, whereby, since January 1, 1868, on every 100 kilograms of salt produced in the territory of that union a tax of 12 marks (about $2.86) is levied. The revenue from this tax on salt was estimated for the fiscal year 1887–'88 at 38,555,000 marks ($9,179,761.90).

The spirit tax is levied (*a*) as a tax on the mash-tub, and (*b*) as a tax on the material of which spirits are made.

(*a*) *Mash-tub tax.*

Here a distinction must be drawn between the two kinds of distilleries of which the so-called "agricultural" (namely, those which are only in operation from September 1 until May 16, and are idle during the summer season, using only the products raised at home, and which in one day do not mash in vats of greater capacity than 1,030½ liters) have to pay only 25 pfennigs (about 6 cents) for mash room for 22.9 liters, whilst the other distilleries must pay 30 pfennigs (about 7 cents) for mashing capacity in the tubs of 22.9 liters, and for each run of the mash.

(*b*) *The tax on the material for spirits.*

This is paid either at the rate of 40 pfennigs (about 9½ cents) or 80 pfennigs (about 19 cents) for every 68.7 litres of the materials used according to their definition and quality. For materials from which spirits are made, not included in the above rates, the tax must be determined by the higher financial authorities of the state which is interested, according to the condition of the crops and the average amounts.

A bill is at present pending in the Reichstag, after the passage of which the taxation of spirits in the German Empire will undergo a considerable change. In the budget of 1887–'88, the revenue from the taxation of spirits is estimated at 38,188,000 marks ($9,092,380.95).

The taxation of beer is determined by the provisions of the law of May 3, 1872. This tax on brewed liquors, when made from the materials commonly used in the manufacture of beer, is levied at the following rates, per 50 kilograms:

When made from—

	Marks.
Grain (malt, groats, etc)	2
Rice (ground or unground)	2
Green starches (namely, those which contain at least 30 per cent. of water	2
Starches, starch flour, including potato flour and dextrine	3
Sugar of all sorts (starch, grape-sugar), as well as solutions of sugar	4
Sirups of all kinds	3
All other substitutes for malt	3

The receipts from the taxation of beer have been estimated for the fiscal year 1887–'88, at 17,846,000 marks ($4,010,952.38).

Stamps on playing cards are regulated by the law of July 3, 1878. This tax is fixed at 30 pfennigs (about 7 cents) on each pack of 36 cards or less, and 50 pfennigs (about 12 cents) on each pack of more than 36 cards. For the fiscal year 1887–'88, the revenues from this source are estimated at 1,040,000 marks ($247,619.05).

The stamp tax on bills of exchange is levied under the law of June 10, 1869. According to paragraph No. 2 of that law the tax is:

	Marks.
200 marks or less	0.10
200 to 400 marks	0.20
400 to 600 marks	0.30
600 to 800 marks	0.40
800 to 1,000 marks	0.50

and for each further sum of 1,000 marks, 0.50 marks more. The receipts for the fiscal year 1887–'88, from this source, are estimated at 6,410,000 marks ($1,526,190.48).

As a groundwork for the estimates of the above revenues the averages of the corresponding receipts of the preceding three years are taken.

As is apparent from the foregoing statements, the indirect taxes are appropriated to the Empire for defraying its expenditures, whilst the direct taxes (ground tax, building tax, income tax, inheritance tax, tax on trade, etc.), remain to the individual states. In this connection it is to be remarked that the Empire shares in the revenues from customs and tobacco tax only to the amount of 130,000,000 marks ($30,952,380.95). Any excess of this amount is apportioned to the individual states according to their population.

THE ADMINISTRATION OF THE INDEBTEDNESS OF THE EMPIRE.

Article 73 of the constitution provides that in cases of extraordinary emergency, the making of a loan, as well as the giving of a guaranty, may be authorized by law. That article also provides that, in case the revenues of the Empire authorized by the budget law do not suffice to cover its expenditures, also authorized by the same law, the credit of the Empire may be employed in order to cover the expenses increased by reason of extraordinary demands, and thus to secure to the Government of the Empire the necessary means. Such authorization can, however, be given only by a special law of the Empire. An indebtedness which is contracted, and a guaranty which is assumed without the consent of the Bundesrath and Reichstag, would be in violation of the constitution and would therefore be void, so that a claim for it against the Empire could never be maintained.

Article 73 refers only to imperial loans and guaranties. It can not be inferred from that article that a law of the imperial legislature must be enacted for every assumption of indebtedness. The imperial administration may lawfully involve the Empire in obligations which are a consequence of the course of business lawfully intrusted to it. It can on its own part, however, contract no financial obligations in the forms of loans or guaranties.

The debts of the Empire appear in the three-fold forms of loans (which have the character of bonded debts), treasury drafts, and treasury notes. Besides these there are various guaranties assumed by the Empire, as, for example, for the last Egyptian loan. Debts have been contracted for the extension of the imperial navy and the defense of the coast; for carrying on the war of 1870–'71; for extending the imperial telegraph system, and for the completion of the buildings for the service of the imperial telegraph administration.

Besides these debts of the Empire there is a so-called "floating imperial debt." The chancellor is authorized by the yearly budget law to issue treasury drafts at a short date and to a fixed amount. The authority to issue such treasury drafts for the fiscal year 1887–'88 may be found in paragraph No. 3 of the law regulating the budget for that year. This paragraph reads: "The chancellor is authorized, for the temporary strengthening of the regular resources of the imperial treasury, to issue treasury drafts as may become necessary, but not in excess of the amount of 70,000,000, marks ($16,666,666.66)."

The necessary sums for the interest and final payment of these treasury drafts must be provided in the budget and must be put at

the disposition of the administration of the imperial debt in due time out of the already provided income of the Empire. The issue of the treasury drafts is confined to the imperial treasury. The object of this system is simply to keep the imperial administration in a position, when in the course of the year the ordinary receipts temporarily do not suffice to cover the accruing expenditures, to be able to obtain the necesary advance to the treasury. Such a loan serves in no wise to cover a deficit, but is characterized, rather, only as a means to secure an advance to the treasury, which within the year's administration must be replaced out of the revenues authorized in the budget. Such current indebtedness may be entitled an administration debt.

The treasury notes constitute a non-interest-bearing debt of the Empire. Their issue rests on the law of April 30, 1870, whereby the chancellor was authorized to cause the preparation of treasury notes to the aggregate amount of 120,000,000 marks ($28,571,428.57), and to apportion them among the confederate states according to the rates of their populations. These notes must be received in payment at all the offices of Empire and of the confederate states according to their face value, and must, on demand, be redeemed in cash at the treasury of the Empire, on account of the Empire. They are, therefore, to be considered as a non-interest paying imperial debt. The preparation of the treasury notes and the administration of the loans of the Empire are confided to the chief Prussian administration of the state debts under the name of the "imperial administration of debts," and the supervision over them is confided to the imperial debt commission.

FREDERICK V. S. CROSBY.

LEGATION OF THE UNITED STATES,
Berlin, July 5, 1887.

ITALY.

REPORT OF MINISTER STALLO.

PRELIMINARY OBSERVATIONS.

It is impossible thoroughly to understand the administrative system of Italy without bearing in mind three great facts, viz:

(1) The scope of the central or national administration of Italy is far more comprehensive than that of the United States, not only because it embraces a number of things which in the United States are chiefly or exclusively within the domain of the individual States, but also because it extends to matters which in our country are wholly without the sphere of direct governmental action. Thus the central administrative authority of Italy not only controls the national domain, the public places and buildings, and the property of various kinds which it has inherited or derived from the several kingdoms and principalities into which Italy was formerly divided, but also a large part of the property which, until recently, was a patrimony of the church and administered under papal or episcopal authority. It fixes and pays the salaries of ecclesiastical functionaries of all degrees of the Catholic Church, inasmuch as by article 1 of the constitution

granted by Carlo Alberto on March 4, 1848 (which, together with a few subsequent additions and modifications, now constitutes the fundamental law of the Kingdom of Italy), that is still the official church of the state, though all other forms of creed are tolerated. It owns or controls not merely the principal highways of the country, but also its great railroad systems, determines the tariffs of freight and personal transportation, and constructs and (by means of leases to, or contracts with, operating companies) manages new lines in all parts of the Kingdom. It similarly constructs and operates lines of telegraphic and telephonic communication. It owns, constructs, and keeps in repair water-ways and hydraulic conduits, and has charge of those which were the property or under the management of the old Italian governments. It provides not only gratuitous elementary education throughout the state, but also the means of higher culture, establishing and maintaining high schools, lyceums, colleges, universities (of which alone there are twenty-two in Italy, besides two which derive their support from private bequests and are only indirectly controlled by the Government), schools of art, and technical and industrial institutes, in all which the tuition is gratuitous and provided at the expense of the state. It establishes and maintains national museums and art galleries, conducts archæological investigations, causes excavations to be made, offers prizes for artistic literary and scientific achievements, publishes books exhibiting the results of scientific research and observation, and even costly editions of the works of distinguished philosophers, poets, and men of science (for instance, it is about to publish, at this moment, a new quarto edition of the works of Galileo), etc.

(2) The administrative system of Italy is one of thorough centralization. All administrative officers, properly so called, including those in the inferior subdivisions of the state provinces, circuits (*circondarii*), districts (*mandamenti*), and communes are appointed by the central authority, *i. e.*, nominally by the King. The heads of the provincial and communal governments, the prefects of the provinces, the subprefects of the circuits and districts, and the syndics (mayors) of the communes are appointed and not elected.

(3) The strict separation between judicial and administrative authorities and functions, as it exists in the United States, does not prevail in Italy. Many of the administrative officers and bodies also discharge judicial functions, and, as in the case of the "court of accounts" (to be hereinafter referred to), constitute tribunals both of first and last resort.

In this connection it ought to be observed that with many of the administrative bureaus are associated advisory boards, whose decision or counsel may be invoked in case of unforeseen administrative difficulties, jurisdictional conflicts, etc. With the council of ministers is associated a council of state, composed of a president, three presidents of sections, twenty-four councilors, six "referendaries," one general secretary, and three secretaries of sections. It is the duty of this council to furnish its advice in numerous cases specified by law; to report upon bills and all matters of whatever nature submitted to it by the ministers; to draft bills and ordinances upon the demand of the Government; to deliberate and report upon all general regulations of an administrative nature, upon demands of extradition made by foreign Governments, upon the carrying into effect of all provisions relating to ecclesiastical matters; to advise the King in cases of application for pardon or for relief in mitigation

of the strict application of the letter of the law, etc. This council of state also acts as a tribunal of final resort in all cases where there is conflict between the judicial and administrative authorities, in controversies between the state and its creditors relating to the interpretation or construction of contracts for public loans, in cases of sequestration of the temporalities of the church; it decides questions relating to the boundaries between the authority and jurisdiction of the state and those of the church, and a number of other cases which can not be specified here.

According to the law of March 20, 1865, the council of state ordinarily meets in three sections, one of which devotes its labors to the affairs of the ministry of the interior, one to those of the ministry of grace, justice, and public worship, and the third to those of the ministry of finance. Each of these sections comprises a president and eight councilors, and may, in certain cases, in conformity with royal decree, be distributed into committees. As has already been intimated, the members of this council are appointed by the King (upon the suggestion of the minister of the interior and the advice of the ministerial council).

Another adjunct of the ministries is the court of accounts (*corte dei conti*), whose functions (to be more particularly referred to hereafter) are also partly administrative and partly judicial. Even in the provinces there are auxiliary boards, called councils of the prefecture, with functions that are in part advisory and in part administrative.

The great central organs of administration are, of course, the ministries, of which there are ten, viz, the ministry of foreign affairs; the ministry of the interior; the ministry of grace, justice, and public worship (*culto*); the ministry of finance; the ministry of the treasury; the ministry of war; the ministry of the navy; the ministry of public instruction; the ministry of public works; and the ministry of agriculture, industry, and commerce.

Although by the terms of the law the ministries of finance and of the treasury are separate and distinct, they have thus far been practically consolidated, the minister of finance acting also *ad interim* as minister of the treasury.

It is perhaps well to note that, according to the fundamental law of the Kingdom, the number of ministries may be increased or diminished, and there may even be ministers without a portfolio, who usually act as premiers or presidents of the ministerial council. Whenever administrative or other matters of great moment press themselves upon the consideration of the ministers they meet as a ministerial council under the presidency of the King.

I do not deem it necessary to specify and enumerate in detail the matters chiefly or exclusively within the competency and jurisdiction of each one of these several administrative departments, with the exception of the departments of finance and of the treasury.

It is the duty of the minister of finance to provide for the collection of all taxes, duties, and imposts, direct and indirect; to supervise the manufacture of salt, tobacco, and cigars (which in Italy is a monopoly of the Government); to superintend and regulate the sale of the products of this manufacture; to conduct the national lotteries; and to keep the great books of account of the state.

The minister of the treasury superintends and controls the accounts of the state, and passes in the first instance upon all disputed financial questions; he has the management of the treasury of the

national patrimony or domain, of the coinage of money, of the public debt, of the deposits and loans, and of the settlement of pensions; and he co-operates with special commissions for the conversion of ecclesiastical funds and for the adjudication of contested rights to pensions. He is the general superintendent and director of the several bureaus of audit and account connected with the various ministerial and other administrative departments, and especially of the general bureau of audit and account, which is chiefly concerned in the preparation of the annual budget.

After these preliminary statements and observations, I proceed to the description of the mechanism whose action constitutes or determines the methods employed in framing and submitting the annual estimates of Government expenditure, and the manner of meeting those estimates when they have become law. This mechanism consists in a system of bureaus of audit and account, called "ragionerie," one of which at least is associated with and subordinate to each department of the public administration, whether central, provincial, or communal. Thus, there is one such bureau for the ministry of foreign affairs; one for the ministry of war; one for the ministry of grace and justice; one for the ministry of public instruction; one for the ministry of the interior; one for the ministry of the navy, while there are are four distinct bureaus for the ministry of public works (viz, one for the "senetariat," one for the general direction of the postal service, one for the general direction of the telegraphic service, and one for the general inspectorate of railways); and, finally, there are five such bureaus for the ministries of finance and of the treasury (viz, one for each of the general directions of the public domain, of the public debt, of the excise system, of the customs and import duties, of the treasury and of the deposits and loans).

Each of these bureaus is directed by a chief called the chief director of audits and accounts (*directore capo di ragionerie*). Similarly, as has already been mentioned, there are bureaus of audit and account connected with the provincial and communal administrations.

All these several bureaus depend upon and report to a central office, called the general bureau of audits and accounts (*ragioneria generale*), which is immediately dependent upon the ministry of the treasury, and governed by a director-general, who bears the title of "direttore generale di ragioneria."

This central bureau of audits and accounts keeps the great book of the finances of the state, according to a method known under the name of the logismographic method, devised by the present director-general of the central bureau of audits and accounts (Comm. Cerboni), and adopted by ministerial decree of the year 1877 (after having been submitted to and approved by the eleventh congress of scientific men at Rome). It is impracticable, of course, within the limits of this report, to give a detailed account of this method, which is explained and illustrated in a book published by Cerboni in 1878 (printed at the royal printing office in Rome), under the title: "Principi e Canoni della Logismografia." (A system of book-keeping somewhat analogous to that of Cerboni was devised, some fifteen or twenty years ago by the then auditor of Hamilton County, Ohio, and was for a time at least (and perhaps is yet) in use in various counties of the State of Ohio, and, I think, also in the State auditor's office at Columbus.) The merits claimed (and I think justly) for this system are, that it is far more compendious than the ordinary system of double-entry book-keeping, and that it enables the ac-

countant at any time to ascertain at a glance the condition of the public finances.

An important adjunct of this system of bureaus of audit and account, and in a certain sense a part of it, is the court of accounts (*corte dei conti*). This court of accounts is charged with both administrative and judicial functions. Its chief administrative functions are—

(1) To supervise the disbursement of the public moneys and the collection of the public dues. To enable the court of accounts to discharge this function, the law requires that the ministerial mandates or decrees which involve an expenditure of money exceeding the sum of 2,000 lire be registered in, and approved by, this court. If this approval be withheld the minister from whose office the mandate or decree has emanated may, with the consent of the council of ministers, insist upon the execution of his mandate or decree, notwithstanding the decision of the court of accounts; and thereupon this court deliberates anew, and, in case it adheres to its decision, it appends to the mandate or decree its conditional approval (*visto con reserva*), together with a statement of its reasons for withholding its unconditional approval, and orders its registration in this form.

All mandates and decrees thus registered are certified up to Parliament every fifteen days.

(2) To determine and prescribe the nature and amount of the security to be furnished by officers charged with the administration of the public finances, and to supervise the action of those functionaries of the state of whom no security is required.

(3) To examine, verify, and report upon the accounts which the ministers are required to render at the end of each fiscal year, so that these ministerial accounts are sent to the general bureau of audits and account, and eventually to Parliament, with accompanying reports (*relazioni*) of the court of accounts.

(4) To liquidate all pensions which are admitted to be a charge upon the treasury.

In exercising its judicial functions the court of accounts sits both as a court of first and last resort and as a court of appeals, besides exercising a peculiar jurisdiction in issuing decrees of revocation and review, as they are called in the technical language of Italian jurisprudence.

As a court of "first and last resort" the court of accounts passes upon all applications for pensions the right to which is disputed; and, while its decisions in those cases are subject to review in the plenary session of the whole court, there is no appeal from them to any other tribunal. It also examines and passes upon the accounts of certain subordinate officers charged with the custody or management of public funds; and whenever an officer is found to be in default the amount of the default is charged against, or deducted from, the security furnished or deposited by the officer in question.

As a court of appeals the court of accounts passes upon all exceptions, taken by parties interested, to the decisions of inferior councils or courts, such as the councils of prefecture, upon questions connected with the accounts of receipts and expenditures in the communal and provincial treasuries.

Decrees of revocation and review may, for the purposes of this report, be described or designated with sufficient accuracy as judg-

ments upon motions for a new trial, bills of review, and writs of error *coram nobis*.

Having described, or at least outlined, the instrumentalities concerned in the preparation of the budget, I now proceed to indicate the manner of framing this budget and presenting it to Parliament.

The fiscal year to which the budget relates begins on the 1st of July and ends on the 30th of June following.

The work of framing the general budget of the state devolves upon the minister of the treasury, who presents it to Parliament, *i. e.*, to the Chamber of Deputies and to the Senate, in the early part of November in each year. With the budget he also presents a draft of the bill for the adjustment of the budget (*i. e.*, its reduction to the form in which it is to become law, after being examined, modified, and approved by Parliament) and for the appropriations required during the fiscal year which it covers, to defray the expenses as estimated in the budget. He likewise presents a general and final account of the administration of the finances during the preceding fiscal year, this account exhibiting, among other things, the balances to be carried into the budget of the next fiscal year.

The general budget prepared and presented by the minister of the treasury consists of thirteen distinct parts or subordinate budgets, technically called statements (*stati*), of which the first ten contain detailed statements of the estimates of the expenditures of each of the several ministries, one a detailed statement of the estimated receipts, and two detailed statements of the receipts and expenditures respectively in the department of public worship (*culto*). These several statements or special budgets are originally prepared by the bureau of audit and account connected with the several ministries and departments hereinbefore referred to. These ministries and departments are expected to prepare their special budgets, as well as the accounts of the past administration of the finances within their respective departments, and to deliver them to the minister of the treasury as soon as possible after the close of the preceding fiscal year, and before the 30th of September.

It is hardly necessary to say that these budgets are, to a great extent, based upon the accounts of the past administration of the finances, a large part of the estimates of future receipts and expenditures being identical with, or calculable from, the receipts and expenditures of the preceding year. And it is equally unnecessary to say that the estimated expenditures enumerated or specified in the budget or budgets, after their final adjustment, represent the legal forms and limits, in conformity with existing or future laws, *i. e.*, the expenditures which the several administrative departments are authorized to incur in discharging obligations already assumed or to be assumed, and in defraying the expenses of the public service, while the receipts enumerated or specified in the budget are those estimated as the probable proceeds of the various sources of revenue established by law.

The fiscal year can never be extended beyond the 30th of June, and for this reason the liquidation and collection of the public revenues, as well as the liquidation and payment of the public debts and expenditures under the old budgets, cease on that day, all unpaid and unliquidated accounts being carried into the new budgets.

Of the form of the budgets and the mode of classifying and itemizing the receipts and expenditures, the tables or skeleton budgets exhibited serve as examples.

As a more complete exemplification of the statements, or special budgets of the several ministries, upon which the general budget is founded, I send under separate cover the statement of the ministry of public instruction (in the form in which it was approved by the law of January 30, 1887) for the fiscal year extending from July 1, 1886, to June 30, 1887.

For the better understanding of these statements it will be useful to premise two explanatory observations.

From an inspection of the statements it appears that the expenditures are divided into ordinary and extraordinary expenditures. The ordinary expenditures are subdivided into effective (*i. e.*, real) expenditures which affect the general balance of the budget, and non-effective expenditures, technically termed *partite di giro*, which do not affect this balance. To this latter category belongs, for example, the rent charged to each ministry for its offices in buildings owned by the state, so that in the general budget this item appears on the one hand as a charge against the state and on the other among the receipts as a credit of the state. Similarly the general fund is both debited and credited with the interest on the national bonds and obligations which have remained in or have returned to the treasury.

As to the extraordinary expenditures, the subdivisions are not the same for the statements of all the ministers, for the ministry of the treasury, in addition to the effective expenses belonging to the same class with those of the other ministers, has the "movement of the capital" (*i. e.*, the change in the value of the property and funds of the state), and the ministry of public works the expenditures for the construction of railways.

Expenditures of the ministry of the treasury, which, for the fiscal year 1886–'87, *are divided into* 163 *chapters, falling under the following general titles:*

- **Ordinary expenditures.**
  - **Effective expenditures.**
    - **At the charge of the state.**
      - Permanent debts.
      - Redeemable debts.
      - Variable debts.
      - Fixed annual expenses.
      - Dotations.
      - Expenses for the legislative chambers.
    - **General expenses of administration.**
      - Ministry.
      - Presidency of council of ministers.
      - Court of accounts.
      - Solicitors of the treasury.
      - Service of the treasury.
      - Royal mints and coinage.
      - Different services.
    - **For special services.**
      - Printing-office of notes and bonds.
      - External administration of the domain.
      - Administration of canals bought by the state.
      - Ecclesiastical fund.
      - Reserve fund for unforeseen expenses.
  - **Non-effective expenditures (*partite de giro*).**
    - Different services.
    - Old pensions.
    - New pensions.
- **Extraordinary expenditures.**
  - **Effective expenditures.**
    - **At the charge of the state.**
      - Variable debts.
      - Different services.
    - **For special service.**
      - External administration of the domain.
      - Ecclesiastical fund.
  - **Movement of capital**
    - Extinction of debt.
    - Accession of debt.

Expenditures of the ministry of finance, which, for the fiscal year 1886–'87, *are divided into* 163 *chapters, falling under the following general heads:*

- Ordinary expenditures.
  - Effective expenditures.
    - General expenses of administration.
      - Ministry.
      - "Intendancies" of finances.
      - Different services.
    - For special services.
      - External administration of the domain and trade taxes.
      - Direct imposts.
      - Excise duties common to the different branches.
      - Lotteries.
      - Taxes on buildings.
      - Customs duties.
      - Tax on consumption.
      - Tobacco.
      - Salt.
      - Tobacco and salt.
      - Miscellaneous expenses.
  - Non-effective expenditures (*partite di giro*).
- Extraordinary expenditures.
  - Effective expenditures.
    - General expenses of administration for special services.
      - Different services.
      - External administration of direct imposts.
      - External administration of excise duties.

Expenditures of the ministry of grace, justice, and public worship, which, for the fiscal year 1886–'87, *are divided into* 23 *chapters, falling under the following titles:*

Expenditures of the ministry.

- Ordinary expenditures ..
  - Effective expenditures .. General expenses for the judicial administration.
  - Non-effective expenditures (*partite di giro*).
- Extraordinary expenditures.
  - Effective expenditures .. General expenditures for the judicial administration.

Expenditures of the special administration of the public-worship fund which, for the fiscal year 1886–'87, *are divided into* 50 *chapters.*

- Ordinary expenditures ..
  - Effective expenditures ..
    - Expenses of administration.
    - Expenses of litigation and contractual expenses.
    - Contributions and taxes.
    - Patrimonial expenses.
    - Expenses ordered by law and legislative decrees.
    - Casual expenses.
    - Reserve fund.
- Extraordinary expenditures.
  - Effective expenditures .. Different extraordinary expenses.
  - Movement of capital.

Expenditures of the ministry of foreign affairs, which, for the fiscal year 1886–'87, *are divided into* 21 *chapters.*

- Ordinary expenditures ..
  - Effective expenditures ..
    - General expenses of representation in foreign countries.
    - Different expenses.
  - Non-effective expenditures (*partite di giro*).
- Extraordinary expenditures.
  - Effective expenditures .. General expenses.

Expenditures of the ministry of public instruction, which, for the fiscal year 1886–'87, *are divided into* 237 *chapters, with the following general titles.*

- Ordinary expenditures ..
  - Effective expenditures ..
    - General expenditures:
      - For the provincial scholastic administration.
      - For the universities and other institutions of superior instruction.
      - For the institutes and scientific literary bodies.
      - For the antiquities and fine arts.
      - For secondary instruction.
      - For industrial and professional technical instruction.
      - For normal, high, and elementary instruction.
      - For different expenses.
  - *Partite di giro* (non-effective expenditures).
- Extraordinary expenditures.
  - Effective expenditures ..
    - General expenditures:
      - For the institutes and scientific and literary bodies.
      - For antiquities and fine arts.
      - For secondary instruction.
      - For normal, high, and elementary instruction.
    - Various expenses.

Expenditures of the ministry of public works, which, for the fiscal year 1886–'87, *are divided into* 204 *chapters, under the following general titles:*

- Ordinary expenditures.
  - Effective expenditures.
    - For public works ..
      - General.
      - Civil engineers.
      - Roads.
      - Water.
      - Reclamation of land (bonifiche).
      - Ports, sea-boards, and light-houses.
      - Railroads.
    - For telegraphs.
    - For posts.
  - *Partite di giro* (non-effective expenditures).
- Extraordinary expenditures.
  - Effective expenditures.
    - General expenditures.
    - For public works ..
      - Highways.
      - Water.
      - Reclamation of land (bonifiche).
      - Ports, sea-boards, and light-houses.
      - Railroads.
    - For telegraphs.
    - For posts.
  - Construction of railroads.

Expenditures of the ministry of war, which, for the fiscal year 1886–'87, *are divided into* 67 *chapters, falling under the following titles:*

- Ordinary expenditures ..
  - Effective expenditures ..
    - General expenditures for the army
  - *Partite di giro* (non-effective expenditures).
- Extraordinary expenditures.
  - Effective expenditures ..
    - For the army.
    - For fortifications and Government defense operations.

Expenditures of the ministry of the navy, which, for the fiscal year 1886–'87, *are divided into* 46 *chapters, with the following titles:*

- Ordinary expenditures ..
  - Effective expenditures ..
    - General expenditures:
      - For the mercantile marine.
      - For the navy.
  - *Partite di goro* (non-effective expenditures).
- Extraordinary expenditures.
  - Effective expenditures ..
    - General.
    - For the mercantile marine.

Expenditures of the ministry of the interior for the fiscal year 1886–'87, *divided into* 172 *chapters, under the following general heads:*

- Ordinary expenditures ..
  - Effective expenditures ..
    - General.
    - For the state archives.
    - For the provincial administration.
    - For works of charity.
    - For the public health.
    - For the public safety (police).
    - For the administration of prisons.
  - *Partite di giro* (non-effective expenditures .
- Extraordinary expenditures.
  - Effective expenditures ..
    - General.
    - For the state archives.
    - For works of charity.
    - For the public safety.
    - For the administration of prisons.

Expenditures of the ministry of agriculture, industry, and commerce, which, for the fiscal year 1886–'87, *are divided into* 85 *chapters, falling under the following general titles:*

- Ordinary expenditures.
  - Effective expenditures.
    - General.
      - Agriculture, industry, and commerce.
      - Statistics.
      - General economy.
    - Special service.
  - *Partite di giro* (non-effective expenditures).
- Extraordinary expenditures.
  - Effective expenditures.
    - General.
      - Agriculture, industry, and commerce.
      - Statistics.
    - For special service.

It is perhaps worthy of note that the general budget (presented to Parliament by the minister of the treasury) indicates, in connection with the several heads of expenses, whether these expenses are fixed or variable, and also whether they are contractual or ordinary—fixed expenses being those which result from organic laws or from permanent engagements, with definite periods of maturity, while all others are variable. Contractual expenses are specified with great particularity in a separate list or table. Ordinary expenses are chiefly those connected with the collection of the revenues of the state.

It may likewise be noted that in the budget of the minister of the treasury there are heads devoted to the "reserve fund," for contracts and ordinary obligations, and for unforeseen expenses. As to the mode of drawing upon this fund it is to be said that drafts upon the reserve fund for contractual or other similar expenses are made by the minister of the treasury, after registration in and approval by the court of accounts, while draughts for unforeseen expenses and their insertion into the various chapters of the budget are made by royal decree upon the proposal of the general bureau of audits and accounts in the ministry of the treasury. Within ten days after the registration and approval of these decrees in and by the court of accounts they are inserted in the collection of the "Acts of the Government" and published in the Official Gazette of the Kingdom.

Whenever an unforeseen expenditure becomes necessary while Parliament is in session, it is authorized by law, and, unless Parliament determines otherwise, the amount of the expenditure is deducted from the sum appearing in the budget as the amount allowed for unforeseen expenses.

All appropriations and disbursements made between the 1st of July and 31st of October, and all those which are made before the discussion of the bill for the definite settlement of the current budget, must be presented to Parliament with the bill (draught of the law)

itself, so as to exhibit the variations between the estimates and the actual expenditures. All other variations are presented to Parliament at its first subsequent meeting.

The budget of receipts, like that of expenditures, is divided into chapters, some of which are subdivided into articles. The ordinary, as well as the extraordinary receipts, are classified as effective and non-effective receipts, the latter being technically called *partite di giro*. The effective extraordinary receipts embrace, among other things, "movements of capital," *i. e.*, changes in the values of Government property and funds, railways, accounts, etc. The following is a skeleton or general formulary of the budget of receipts, with an appendix showing the classification of the revenues of the special administration of the fund for public worship:

Statement of the revenue, which, for the fiscal year 1886–'87, *is divided into* 102 *chapters, with the following general titles:*

- Ordinary income
  - Effective receipts
    - Patrimonial income.
    - Contributions
      - Direct imposts.
      - Trade tax.
      - Consumption tax.
      - Various taxes.
    - Proceeds of the public service.
    - Payments and reimbursements.
    - Various receipts.
  - *Partite di giro* (non-effective receipts).
- Extraordinary receipts
  - Effective receipts
    - Contributions.
    - Reimbursements.
    - Various receipts.
  - Movement of capital
    - Sale of property and release of ground rents.
    - Collection of debts.
    - Opening of credits.
  - Railway construction.

Statement of the revenues of the special administration of the fund for public worship, which, for the fiscal year 1886–'87, *are divided into* 12 *sub-heads.*

- Ordinary receipts
  - Effective receipts
    - Consolidated bonds and proceeds from other sources.
    - Five per cent. bonds having no title.
    - Other patrimonial incomes.
    - Various proceeds.
- Extraordinary receipts.
- Movement of capital.

The budget exhibits all the receipts in their integral or gross amounts, without any deduction for expenses of collection or other expenditures of whatever nature.

The ministers can not avail themselves of any excess in the amounts received for the purpose of increasing any of the assignments or allowances made in the budget for the expenses of the several departments; and whenever exceptional receipts come into the hands of a particular minister they must immediately be covered into the treasury, and accounted for under the respective heads under which they fall; or, if they do not come under any of the heads mentioned in the budget, they must, if they are of sufficient importance, be placed under new heads with appropriate titles descriptive of them, or specified in the chapter entitled "Different eventual receipts of the ministries." This chapter is divided into as many articles as there are ministries.

I now proceed to describe more minutely the mode of framing a budget and the process of its adjustment after it has been presented to Parliament.

As has already been stated, the elements for the formation of the several statements or special budgets are furnished by the various administrative departments to the several bureaus of audit and account attached to the ministries. Each of these bureaus, having examined the accounts so furnished and added the necessary observations, submits them to the approval of the minister. Where there are several bureaus of audit and account attached to the same ministry, the respective heads of these bureaus report the accounts with the approval of the various chiefs of the departments to that bureau of audit and account which is charged with the duty of preparing the statement or special budget, and this, in turn, submits it to the approval of the minister.

After having been approved by the ministers the several statements are transmitted to the general bureau of audits and accounts, which is to elaborate them into a general budget. This general budget is presented by the minister of the treasury to Parliament in the early part of the month of November preceding the fiscal year to which it relates. Thereupon the principal estimates of expenditures and receipts are referred to appropriate parliamentary committees; and when the committees have made their reports the several statements or special budgets are separately discussed, chapter by chapter and article by article, and approved, modified, or rejected. The account of the administration of the finance during the preceding year is similarly dealt with; and when this also has been adjusted the summary (*riepilogo*) of the budget is also adjusted, and the whole is then passed into a law.

After the parliamentary settlement of the budgets and accounts the ministers redistribute the various sums assigned to each chapter of the budget into articles; and they have the right to transfer items or amounts from one article to another. But this redistribution must be approved and registered by the court of accounts.

Simultaneously with the budget of the ensuing fiscal year the minister of the treasury presents to Parliament also the draught of a law for the settlement or liquidation of the accounts of the current fiscal year. This draught contains:

(1) A synopsis of those chapters of the budget which require variation or change, in accordance either with laws already passed or with appropriations from the reserve fund already made and approved:

(2) A summary of the budget with the modifications and additions resulting from these charges. As a matter of course this bill or draught of a law is compiled from the elements furnished by the several central administrative departments before the 30th of September.

In addition to the sums corresponding to the requirements, which result from these variations, Parliament also provides for the amounts necessary to balance the budget, *i. e.*, to make the receipts equal to the expenditures. If this can not be effected by an increase of the revenues, or a reduction of the expenditures, recourse must naturally be had to loans, which are authorized in the manner usual in the practice of all European governments, and which do not call for special notice. It may be observed, however, incidentally, that the practice of pledging particular revenues, or sources of income, as security for loans, has now fallen into disuse in Italy.

In framing the law for the final adjustment of the budget, account must be taken—

(1) Of the new and increased receipts provided for by new laws, or resulting from the continuing operation of old laws.

(2) Of all the new and increased expenditures voted since the beginning of the current fiscal year.

(3) Of all the appropriations from the reserve fund made by royal or ministerial decrees to meet unforeseen expenditures, even although these decrees have not yet met with the express sanction of the law.

(4) Of all other new facts which may lead to an increase or diminution of the receipts or expenditures, or both, as they are estimated in the various chapters of the budget.

After the passage of the law for the adjustment of the budget, the minister of the treasury compiles an explanatory table in which, for each chapter, are indicated—

(1) The estimates approved, or items established or authorized in the budget.

(2) The variations sanctioned by the law of adjustment.

(3) The sums which, in view of these variations, constitute the definite allowance or assignment made by law.

(4) The active or passive balances brought over from the preceding fiscal year, as they appear in the general account of the administration of that year, presented by the minister of the treasury simultaneously with the budget and the draft of the law for its adjustment.

(5) The estimates of cash disbursements.

The cash disbursements in any given fiscal year naturally amount to less than the expenditures authorized by law, as specified in the several chapters of the budget, and similarly, the cash receipts are inferior to the budget estimates, because it is impossible to liquidate all the expenditures and to collect all dues to the State before the expiration of the fiscal year.

Unavoidable but unforeseen disbursements may be made by order of the respective ministers within certain limits established by law and within the limits of the budget.

Having described the form of the budget and the methods employed in framing it, I now proceed to indicate the methods and expedients resorted to by the Italian Government for the purpose of meeting the expenditures of the state.

The revenues of the state comprise all the incomes, returns, contributions, and credits of whatever nature to which the Government is entitled by virtue of special laws, contracts, or otherwise. In Italy, as elsewhere, the most important sources of revenue are the contributions in the nature of imposts or taxes, which, in the Italian system of finance, are classified as follows: (1) Direct taxes; (2) taxes on consumption; (3) taxes on business; (4) divers taxes (fines, lotteries, etc.).

To the class of direct taxes belong the taxes on incomes from personal property and all assessments on real estate; that is, bonds and buildings.

The tax on incomes from personal property amounts to 12 per cent., in addition to a sum equal to one-tenth of this amount by way of contribution to the war fund, so that the whole tax is 13.20 per cent. on the income. This tax is collected from every individual and corporation in the state, with the exception of foreign diplomatic and (to a certain extent) consular agents, and of soldiers beneath the rank of officers. But the basis for the assessment of this income tax is

not the same for all kinds of income, the following being a rough classification of the taxes on the various kinds of income:

(*a*) Permanent incomes, so called, including those from interest on loans, are assessed at their full value.

(*b*) "Temporary," or contingent incomes, which are the fruit partly of capital employed and partly of labor expended, are reduced, for purposes of taxation, to six-eighths of their gross amounts.

(*c*) Incomes resulting from labor without the concurrence of capital, and incomes which are the fruit neither of labor nor of capital, but derived from voluntary gifts or gratuities, are reduced to five-eighths of their gross amount.

(*d*) Incomes in the form of salaries, pensions, or other allowances or assignments made by the state, the provinces, or the communes, are reduced to one-half of their full amount.

Whenever the income upon which the tax is levied is derived from the state, the amount of the tax is deducted from the payment and retained by the state. In all other cases the tax assessments or levies are entered in rolls or duplicates and collected by appropriate officers or agents.

The assessments on real estate are made by a system of official valuations by officers who also apportion the amounts to be paid on each parcel of property among the several owners. This mode of assessment is very imperfect and unequal, but will soon be replaced by a new system now in process of elaboration, in conformity to the law of March 1, 1885, known as the law "della perequazione fondiaria," *i. e.*, for the equalization of assessments on real estate throughout the Kingdom.

Before the passage of this law the most divergent methods of assessing and levying taxes on real estate were in vogue in the various provinces, which, before the unification of Italy, had been independent principalities or states.

The tax on buildings is 12 per cent. on their value in addition to three-tenths of the rent or income thereof.

The taxes on consumption comprise:

(*a*) The duties on imports and exports.
(*b*) The imposts on certain articles of home consumption, which are also produced at home.
(*c*) The taxes on the manufacture of beer, spirits, mineral water, gunpowder, prepared chicory, beet sugar, cotton-seed oil, etc.
(*d*) The avails of the salt monopoly.
(*e*) The avails of the tobacco monopoly.

The business taxes comprise:

(*a*) The succession tax, which is proportionate to the amount of the inheritance or bequest.
(*b*) The registry tax, which may be proportional or fixed. The proportional registry tax applies to all acts or documents which import obligations, or discharges from obligations, or by means of which property, real or personal, is transferred, leased, mortgaged, or pledged. The fixed registry tax applies to all acts and documents of a judicial or non-judicial nature which serve as manifests of title, and to all other non-mercantile papers and documents, as well as to all authenticated copies of or extracts from the same.
(*c*) The stamp tax, which may also be proportional, graduated, or fixed. The proportional stamp tax applies to bank-bills and checks, mercantile contracts, instruments of credit by whomsoever issued, negotiable or non-negotiable. It does not apply, however, to certificates of stock held by foreigners residing without the State.

The graduated stamp tax applies to policies of insurance, to orders for the delivery of personal property other than merely to foreign bills payable within the state, receipts, acceptances, etc. It also ap-

lies to powers of attorney, invoices, and a number of other documents relating to mercantile transactions.

The fixed stamp tax applies to all documents growing out of the operations of the stock exchange, to playing cards, etc.

(*d*) Taxes on life insurance contracts.

(*e*) Taxes of mortmain, levied on the revenues from real as well as personal property belonging to provinces, communes, and other corporations.

(*f*) Taxes on the registry and renewal of mortgages, and other charges on real estate.

(*g*) Taxes on Government licenses, such as licenses to hunt, to carry arms, etc., to assume or change names, coats-of-arms, etc., theatrical licenses, licenses for the transportation of corpses, corporation grants, passports, legalization of passports, authentication of signatures, market privileges, patents, trade-marks, designs, or models, copyrights, license to practice professions which are subject to the control of the state, etc.

(*h*) Taxes on the transportation of freights and passengers by railroads (amounting to 18 per cent. on the cost of rapid transportation of freight and baggage and on passenger fares, and to 2 per cent. on the cost of slow transportation). This tax is paid directly by the operating companies within forty-five days after the end of each month. The assessment and payment of this tax are under the control of the minister of public works.

In view of the concluding passage in the circular letter calling for this report, and in view of the fact that this subject will no doubt be fully and exhaustively treated in the consular reports, and especially in the report of the consul-general at Rome, I do not deem it necessary to enter into further details respecting the objects of incidence of the Italian system of taxation and the rates and amounts of the assessments and levies. But it is proper briefly to refer to the Italian methods of collecting the taxes and imports, which are in some respects peculiar and, I may add, barbarous, being survivals of the practices of the old governments pre-existing to the present national Government of united Italy.

It may be said, generally, that the "direct" taxes are not directly collected by the state. The administrative departments of the state simply prepare the tax lists or rolls, and thereupon the actual collections of the taxes is intrusted to private persons or associations, called "exactors and receivers of direct imposts" (*esattori e recevitori delle imposte dirette*), who are not officers of the state at all, but to whom the right to collect the taxes is let or farmed out, their compensation being, not a salary or fixed sum, but a commission or percentage on the amount collected. In some cases these persons or societies even buy the right to collect the taxes within a given region, paying a fixed amount to the state, and taking the chances of collection themselves.

Where commissions on percentages are paid they are not uniform throughout the state, but vary according to circumstances, their amounts being on the whole proportional to the difficulties of collection.

Similarly the taxes on internal consumption are not collected directly by the state, but their collection is left to the communes, which pay a fixed annual amount to the state and then reimburse themselves, as best they may, out of the pockets of the tax-payers.

The communes in turn in many cases resort to the system of "farming out" the taxes to private individuals or associations, who in most cases also undertake to pay fixed sums (although they sometimes are paid percentages on the amounts collected), and then proceed to harry the tax-payer.

The only cases in which the collection of the taxes is effected directly by appropriate officers appointed and salaried by the state are those of the business taxes and the duties on exports and imports.

It is important to note that the expenses of collection are thrown upon the tax-payers, being added to the amounts assessed against them or their property.

As to the state monopolies of salt and tobacco it is sufficient to say that the prices at which the persons licensed to sell the different varieties of salt, tobacco, and cigars are authorized to sell them are fixed by the Government, the prices paid to the Government being a trifle less than those paid by the consumers.

It ought to be added that there are exceptional cases in which neither the communes nor private individuals or associations are willing to undertake the collection of the taxes, so that the Government is forced to collect them directly through its own officers; and that in the city of Naples, for special reasons not necessary to detail here, the national Government directly collects *all* the taxes on consumption, including those imposed by the municipality, to which, in lieu thereof (*i. e.*, of the municipal taxes on consumption), it pays an annual sum of 10,000,000 lire. And it ought also to be added that the Italian system of imposts and duties on personality, like the system of assessments on real estate, is at this moment undergoing thorough revision, a number of projects relating to this subject having been submitted to Parliament and referred to committees, some of which have already made voluminous reports. In time this system will, no doubt, be rationalized and brought up to the standard of modern financial science, so that the Italian tax-payer, though his burdens will always be heavy, may at least enjoy the comfort of knowing that he is taxed on scientific principles and uniformly with all the other inhabitants of the state. It remains to be seen, however, whether and to what extent the Italian statesmen will succeed in eradicating the fundamental vice of their fiscal system, which consists in the fact that this system finds its principal source of revenue in the taxation of incomes, all taxes on incomes being largely dependent on statements and valuations of the tax-payers themselves, and thus offering standing temptations to perjury and fraud. And this evil is aggravated by the circumstance that the rewards of labor—wages and salaries—as well as the net returns of capital, are smaller in Italy than in any other European country (with the exception, perhaps, of some of the smaller states on the Balkan peninsula), and suffice to meet the ordinary demands of life only on the basis of the most rigid economy.

But it is not in Italy alone that the problem of devising an automatic system of taxation has hardly entered upon the first stages of its solution.

J. B. STALLO,
Minister.

LEGATION OF THE UNITED STATES,
Rome, Italy, July 9, 1887.

NETHERLANDS.

REPORT OF MINISTER BELL.

I have the honor to acknowledge the receipt of the Department's circular instruction of April 9, 1887, in relation to the methods employed in the Netherlands in framing and submitting the annual estimates of governmental expenditure, as well as the manner of meeting these estimates when they become a law, and I have the honor to report that there exist no administrative regulations respecting the composition of the annual budget of expenses and receipts of the Kingdom of the Netherlands.

The constitutional provisions respecting the budget are found in section 6 of chapter 3 of the constitution, and are in substance as follows:

Article 119 provides that the budget of expenditures and of receipts of the Kingdom shall be fixed by law.

Article 120 provides that the projects of law relative to the budget shall be presented annually, in the name of the King, to the second chamber immediately after the opening of the ordinary session of the states general before the commencement of the year which the budget concerns.

Article 121 provides that each chapter of the budget of expenditures shall contain exclusively those of a single department of the general administration.

The law can, however, authorize the transfer from one chapter to another.

Article 122 provides that the accounts of the receipts and expenditures of each year shall be submitted to the legislative power with the statement approved by the chamber of accounts.

The payment of the account is regulated by law.

The ordinary budget of the expenses of the state is divided into eleven chapters, entitled as follows:

I.—Civil list of the King.
II.—States general, King's cabinet, etc.
III.—Department of foreign affairs.
IV.—Department of justice.
V.—Department of interior.
VI.—Department of the navy.
VII A.—The national debt.
VII B.—Department of finance.
VIII.—Department of war.
IX.—Department of "waterstaat," public works and commerce.
X.—Department of the colonies.
XI.—Unforeseen expenses.

The budget of receipts forms a separate budget.

The fiscal year is the same as the calendar year, from January 1 to December 31.

The ordinary method followed in the composition of the budget of expenditures is as follows:

At each ministerial department the composition of the budget is commenced at the end of the second quarter of the fiscal year.

In general, and except the circumstances render it necessary to fol-

low another line of conduct, the mean figures of the three preceding years are adopted as a basis for the estimate of the expenditures for the new year.

The results obtained in the several divisions or sections of the several departments are communicated through the respective ministers to the minister of finance in the month of July of each year.

The minister of finance in the mean time has made an estimate of the ordinary receipts for the coming year, and addresses to his colleagues such observations as he may deem proper and necessary in order to establish an equilibrium between the receipts and the expenditures.

The minister of finance has not the right to impose upon his colleagues a reduction of their estimates.

He can only make suggestions and observations, and invite them to confine their ordinary expenditures within the limits of the ordinary receipts.

The different projects are subsequently examined and discussed in the council of ministers.

After these deliberations each minister prepares a definite statement of the budget of his department, after which the different chapters are submitted for the consideration of the council of state.

When this examination is terminated, the council of state returns the chapters of the budget to the minister with such observations as may seem proper.

The ministers profit by these observations in so far as they may deem them useful, and it is after a further examination in the light of such observations that the different chapters of the budget are transmitted by the several ministers to the minister of finance for presentation to the second chamber of the States-General, simultaneously with a definite budget of receipts elaborated in the department of finance in the same manner as the budget of expenditures.

The opening of the ordinary session of the States-General is fixed for the third Monday of the month of September each year.

Ordinarily, on the Wednesday following the opening the minister of finance presents in person the budget of the state to the second chamber and at the same time pronounces a discourse, in which he gives a detailed account of the financial situation of the country.

After the presentation of the budget it is referred to five separate committees of the chamber to be examined.

Each of these five committees names a subcommittee with authority to prepare reports, which are intended to comprise the substance of the observations to which each chapter of the budget has given rise in the committees.

These reports are referred to the respective ministers, who address such replies as they may deem proper and necessary to satisfy the observations made in the committees.

These replies are addressed in writing to the president of the general chamber.

In addition to these reports from the committees of the second chamber, in relation to the different chapters of the budget of expenditures, as well as the budget of receipts, there is always a special report comprising general considerations concerning the political and financial policy of the Government, which report is replied to in writing by the Government.

After this exchange of reports and replies in writing the day is fixed for the public discussion of the budget.

Before entering upon the discussion of the different chapters of the budget the chamber is ordinarily occupied with the discussion of political and financial questions.

This general discussion having terminated, the different chapters are submitted to debate.

Each member of the chamber has the right to propose amendments either to increase or reduce the expenditures.

The ministers, who appear in person on the floor of the chamber in charge of their budgets, have also the right to modify their budgets during the course of the discussion.

Each chapter is submitted separately to a vote.

If one of the chapters is rejected the minister whom it concerns presents his resignation, and a provisional credit, usually for three or six months, based upon the budget of the current year, is presented and generally voted without discussion.

After the vote of the different chapters by the second chamber, the budget is referred to the first chamber, where it is examined in committees.

These committees, to the number of four, name subcommittees, as in the case of the second chamber, for the purpose of formulating the reports which are sent to the respective ministers for their replies.

When these replies are received by the president of the first chamber, the public discussion of the several chapters of the budget is fixed for a time definitely determined.

The different chapters having been voted, the projects of law are sent by the president of the first chamber to the cabinet of the King.

After the approval of the different chapters by the King, they are published in the official journal and also by the Bulletin des Lois.

There is a distinction made in the Netherlands between ordinary and extraordinary expenditure and revenue.

Under the head of extraordinary expenditure the minister of finance usually classes or includes all expenditure for public works, such as the construction of railways, water-ways, fortifications, etc.

The relation between ordinary expenditure and ordinary revenue is generally very satisfactory in this country.

The aggregate of the surplus and deficits during the past sixteen years having been about equal in amount, the existing financial situation of the country may be said to be sound.

The minister of finance some time since asked for the authority to issue treasury bills, to an amount not exceeding 17,000,000 florins, to meet temporary requirements arising from the cost of public works, and at the same time stated that sooner or later it would be necessary to raise a loan to meet the deficits arising from extraordinary expenditures during the years 1884, 1885, 1886, and 1887, the aggregate amount of which is stated at 32,567,163 florins.

ISAAC BELL, JR.,
Minister.

THE HAGUE,
Netherlands, June 15, 1887.

No. 1.—*Statement of expenditures.*

Number and title of chapter.	Budget estimate of expenditure for 1887.	Expenditure sanctioned for 1886.	Expenditure incurred or still to be incurred for 1885.	Increase in estimates for 1887 compared with expenditure in 1885.
	Florins.	*Florins.*	*Florins.*	*Florins.*
I. Civil list of the King	650,000.00	650,000.00	650,000.00	.....
II. States-general, the King's cabinet, etc., etc	615,507.00	610,634.00	592,051.35½	23,455.64½
III. Department for foreign affairs	694,151.00	687,690.00	689,043.98	55,107.12
IV. Department of justice	5,073,509.00	4,467,981.00	4,406,708.60½	666,800.39½
V. Department of the interior	10,189,318.00	10,892,585.00	9,849,920.64	339,397.36
VI. Department of the navy	12,382,005.70	12,652,156.20	11,095,944.57	1,736,061.13
VIIa. The national debt	33,871,314.28	36,589,290.28	33,368,688.82	502,625.66
VIIb. Department of finance	23,323,244.83½	23,435,236.83½	18,735,364.95½	4,587,879.88½
VIII. Department for war	20,373,616.00	20,424,955.91	19,978,202.93	395,413.07
IX. Department of "Waterstaat," public works, and commerce	24,456,696.21	20,894,817.21	22,005,847.59	2,453,548.62
X. Department for the West Indian colonies	1,297,708.43	1,168,344.00	1,210,868.97	86,839.46
XI. Unforeseen expenses	50,000.00	50,000.00	43,594.59	6,405.41
Total	133,429,270.45½	132,543,648.93½	122,575,736.80½	10,853,533.65

No. 2.—*Estimates.*

Sources of income.	Estimate for 1887.	Estimate for 1886 as approved.
	Florins.	*Florins.*
Direct taxes	26,949,000	26,930,350
Excise duties	42,340,000	41,875,000
Indirect taxes	22,008,500	21,397,000
Import duties	4,912,000	4,962,000
Tax on gold and silver wares	231,100	351,100
State domains	2,400,000	2,440,000
Postal service	5,550,009	5,450,000
Telegraph service	1,092,100	1,089,500
State lottery	661,475	661,475
Shooting and fishing licenses	144,000	142,000
Pilot dues	1,000,000	1,000,000
Royalty on mines	3,225	3,790
State railways	2,080,000	1,950,000
Miscellaneous receipts	4,898,675	4,116,250
	113,695,075	112,218,465
Subsidy from the Dutch East Indian resources in aid of the home revenue	(*)	(*)
Reimbursement by the Dutch East Indian Government of interest paid on their share in the public debt of the Netherlands	2,352,150	2,455,600
Contribution from the state domain fund	250,000	475,000
Total	116,297,225	115,149,065

* Left in abeyance.

No. 8.—*Table of expenditures during the years* 1866–1885.

Years.	General service.	Interest on the public debt.	Redemption of the public debt (sinking fund).	Construction of state railways.	Other expenses.	Total.
	Florins.	*Florins.*	*Florins.*	*Florins.*	*Florins.*	*Florins.*
1866	51,018,539.97	27,223,379.72½	8,433,919.40	13,500,000.00	5,349,027.14½	105,524,866.24
1867	58,825,939.26½	27,101,588.72	432,177.62½	10,000,000.00	15,628,050.77	111,987,757.38
1868	53,704,036.31½	27,094,295.46½	431,323.38½	12,000,000.00	2,901,793.27½	96,131,448.43½
1869	54,314,688.61	27,056,664.55	496,291.40	10,000,000.00	2,557,225.02½	94,424,869.58½
1870	55,139,654.98	27,032,307.90½	420,090.29½	10,000,000.00	6,505,697.80½	99,107,750.98½
1871	55,976,147.74	27,017,459.26½	300,126.25	8,000,000.00	3,166,305.66	94,460,038.91½
1872	57,377,639.65	26,726,260.78½	10,353,692.36½	8,000,000.00	6,474,589.62½	108,932,182.42
1873	57,984,151.18	26,478,901.09½	9,339,126.78	6,000,000.00	8,231,344.16½	108,033,523.22
1874	61,025,126.20	26,105,384.16½	972,445.67½	6,500,000.00	4,749,399.63	99,352,355.67
1875	63,929,251.31	25,911,607.21½	10,573,379.17½	8,000,000.00	10,497,010.15	118,911,247.85
1876	67,705,625.60	25,623,217.61½	657,892.19½	6,600,000.00	12,048,483.98	112,635,219.39
1877	70,592,936.32	25,594,109.44½	656,698.81½	10,100,000.00	11,221,665.91½	118,165,410.49½
1878	70,609,722.15	26,541,534.80	708,537.73½	8,500,000.00	9,537,093.89½	115,896,888.58
1879	71,009,132.97	27,204,308.73	674,710.37½	8,000,000.00	8,403,111.81	115,291,263.88½
1880	71,958,773.22½	27,207,765.96	725,476.75½	7,000,000.00	6,158,594.84½	103,050,610.78½
1881	75,142,509.84	27,393,642.36	1,037,792.37½	13,000,000.00	7,077,634.06	123,651,578.63½
1882	79,907,485.37	28,056,729.50½	1,092,155.75	14,000,000.00	6,841,506.55	129,897,877.17½
1883	82,715,756.50	29,313,623.18½	1,120,100.37½	14,500,000.00	9,932,397.36½	137,581,877.42½
1884	82,473,696.29½	30,732,157.91	1,400,659.98	11,000,000.00	7,698,291.38½	133,244,805.57
1885	76,968,321.66	31,899,875.07	1,468,813.55	5,000,000.00	7,338,726.32½	122,575,736.80½

SPAIN.

REPORT OF MR. STROBEL.

Referring to the Department's circular of April 9, 1887, requiring information upon the subject of annual expenditures and the methods of raising revenue, as well as the system of credits followed in this country, I have the honor to submit the following report, the results of my examination of the subject. The report will be divided into three parts.

I.—A description of the methods of framing the annual budget and its progression through its different stages before it becomes a law, of which the budget presented during the present year of 1887–'88 will be used as an example.

II.—The manner of meeting the estimates when they become a law, which will necessitate an examination of the principal sources of Spanish revenue.

III.—The system of loans or credit, which will be best considered and explained by a cursory glance at the course of the financial administration of the country since the restoration of the Bourbons in 1875.

I.—FRAMING THE BUDGET.

According to article 85 of the Constitution, the government must present every year to the Cortes the general budget of the expenditures of the state (*presupuesto general de los gastos del estado*), accompanied by the plan of taxation and proposed means of meeting these expenditures. In accordance with the law of June 25, 1870, each minister prepares and signs the annual estimate of his expenses classified by headings. This estimate of ministerial expenditures is prepared in each ministry in the department under the charge of the subsecretary, except in that of public works, where there is no such official, and remitted to the ministry of finance.

Here, after examination and collation by the subsecretary of this ministry, assisted by a committee established by the above-mentioned

law called the "committee of general intervention in the administration of the state (*comision de la intervencion general en la administracion del estado*), it goes for discussion before the council of ministers, and after approval by this body is presented to the Cortes in accordance with a royal order of authorization.

The general scheme of the budget is always the same. It is divided into two main divisions, marked, respectively, A and B, the estimate of expenditures (*presupuesto de gastos*) and the estimate of receipts (*presupuesto de ingresos*), the object of every financial minister being, of course, to preserve the balance between the two. The budget of expenditures is again subdivided into two parts: (1) The general obligations of the state (*obligaciones generales del estado*), and (2) obligations of the ministerial departments (*obligaciones de los departamentos ministeriales*).

Each of these parts is divided into sections, the first obligations of the state into five, namely: (1) the royal household; (2) the legislative bodies; (3) the public debt, divided into consolidated, redeemable, and treasury obligations; (4) charges of justice (*cargas de justicia*), indemnities due from the state for appropriation or other reasons; and (5) the passive classes (*clases pasivas*), *i. e.*, annuities and pensions, civil and military.

The second part, obligations of the ministerial departments, includes ten sections, as follows: (1) The presidency of the council of ministers; (2) the ministry of state or foreign affairs; (3) ministry of grace and justice; (4) ministry of war; (5) ministry of marine; (6) ministry of the interior; (7) ministry of public works; (8) ministry of finance; (9) expenses of collecting taxes and revenue; and (10) the colony of Fernando Po. This last section has been lately added, and was formerly included in the colonial budgets, which are entirely separate from the Spanish budget, and are under the supervision of the minister of the colonies.

In addition to the subdivision of the two parts of the budget of expenditure into sections, these sections are again split up into headings (*capitulos*), which are in turn divided into articles.

Any item of the budget of expenditure can, therefore, be cited by section, heading, article.

To make up the budget of receipts five sources of income are relied upon: (1) Receipts from taxes; (2) imposts; (3) customs; (4) Government monopolies; (5) properties and rights belonging to the state; (6) public treasury. These will be considered in detail in the discussion of the method of meeting expenditures.

To sum up, therefore, the invariable form of the budget on its presentation to the Cortes is: (1) Division into two parts, expenditure and receipts; expenditure into general obligations of the state and obligations of the ministerial departments; general obligations of the state into five sections, itemized into headings and articles; and obligations of the ministerial departments into ten sections, itemized in the same way. The budget of receipts is simply divided into six parts, corresponding to the sources of income mentioned above.

In addition to the royal decree authorizing the presentation, the minister of finance not only reads the statement of the budget in the above form, but also prefaces it with a memorial, in which he reviews the financial history of the last two years, and particularly compares the budget as estimated for these years with the actual results. He then deals with his own budget, explains elaborately the deficit, which in this country offers a subject for financial ingenuity, and suggests

the measures for improving the conditions of the treasury, which he has already presented or intends to present to the Cortes in the shape of bills (*proyectos de ley*). The budget, with the memorial, is immediately referred to the budget committee, a committee for the purpose of discussing and reporting upon all financial questions, created in the following manner:

At the beginning of each session both houses of the Spanish Cortes, the lower house (*congreso*) and the upper house (*senado*), are divided by lot into seven sections, each of which elects a president, vice-president, and secretaries. Every month or two these sections are recast by a new allotment. The houses adjourn and go into sections for the purpose of electing committees. An ordinary or temporary committee for the consideration of any ordinary law or question consists of seven members, one elected from each section. The budget committee, however, being a permanent committee for the most important purposes, is composed in the lower house, or congress, of seven members elected from each section, or thirty-five in all, and in the senate of three members from each section, or twenty-one in all. The committee elects its own chairman or president, vice-president, and secretary.

The budget, as soon as presented to the house of deputies, is immediately taken in charge by that committee, where it remains from six weeks to two months. The object of the committee is to discuss it thoroughly and to make reductions wherever possible. The majority report of the committee is then made to the house with the alterations that may have been decided upon. There may be minority reports (*votos particulares*), recommending an entirely reformed budget, with a series of bills necessary to carry it out, as was the case with the budget of 1882–'83, when Sr. Moret, the president of the committee, now minister of foreign affairs, introduced an entirely new budget in opposition to the one submitted by the minister of finance; or a minority report may be limited to any single article or heading in any particular section of the budget.

As soon as the budget is reported back the general debate begins, and if there is a minority report attacking the whole budget and suggesting a new one as alluded to above, this debate is usually opened by a speech of some leading member of the committee against the minority report, who is answered by the signer of the minority report. After this debate, usually ending in the rejection of the minority report, a discussion begins on the reported budget as a whole. The defense is conducted by the committee, the minister of finance intervening whenever he sees fit. An amendment may be made at any time by members, and is handed to the officer in the chair, who reads it when the debate reaches the portion of the budget to which it applies, and inquires of the committee whether the amendment is accepted. If accepted, it becomes a part of the reported budget; if not, there is a debate on the amendment unless withdrawn, and a vote is taken upon it.

After the discussion of the budget as a whole, the debate begins on each section. Following the custom in debate in the Spanish Cortes, there are a certain number of speakers generally listed ahead for and against, speakers *contra* beginning, but as there is no limit to the time or number of speakers the discussion of the budget in the House of Deputies usually occupies a very long period. Each speaker and the one opposed to him has the right to rectify (*rectificar*), that is, continue to answer each other any number of times. Any member

outside of the regular speakers who considers himself reflected upon or alluded to in the regular debate, also speaks to allusions (*hablar para alusiones*) which involve another series of rectifications and sub-rectifications. This system of oratorical ramification, which is such an abuse in the Spanish Cortes, often spins out the debate on the budget until the near approach of the close of the session. The necessity of holding morning and evening sittings and the wilting effect of the heat of the weather upon the heat of eloquence often necessitates undue precipitancy in the disposal of the last sections of the budget.

After the budget has passed through all the debates of the lower house, debates on the whole, on the sections, on the minority reports, and on the amendments, it is sent to the senate with any resulting changes that may have been made. In the senate, its progress is precisely the same as in the house. The committee, as has been stated, is composed of twenty-one members instead of thirty-five, and as the budget rarely reaches the senate until very late in the session, the discussions are much shorter and the procedure is more hurried. As in all questions, the important discussion is in the lower house.

Disagreements between the two houses are settled by conference committees made up of members of the budget committees of the two houses, and when the budget has passed the senate, following the same stages as in the house, it is signed by the sovereign and becomes the law of the land.

Such is the general system of handling the annual budget, and I shall exemplify it by the budget which finished its course and became a law on the 30th of June. In that budget, as presented to the Cortes by the minister of finance, the first great division, the budget of expenditures (*presupuesto de gastos*), was as follows:

A.—BUDGET OF EXPENDITURE.

General obligations of the state.

Items.	Pesetas.	Dollars.*
Royal household	9,350,000	1,870,000.00
Legislative bodies	1,998,285	399,657.00
Public debt	274,861,752	54,972,350.40
Indemnities	2,167,441	433,488.20
Pensions	50,209,728	10,041,945.60
Total	338,587,206	67,717,441.20

* In his reductions of Spanish into American money Mr. Strobel has estimated the peseta at 24 cents. The Treasury valuation is 19.3 cents.

Obligations of the ministerial departments.

Items.	Pesetas.	Dollars.
Presidency of the council of ministers	1,148,959	229,791.80
Ministry of state	5,396,658	1,079,331.60
Ministry of grace and justice	59,680,656	11,936,121.20
Ministry of war	158,306,408	31,661,280.60
Ministry of navy	44,572,322	8,914,464.40
Interior	29,142,222	5,828,444.40
Public works	103,578,158	20,715,631.60
Finance	22,792,370	4,558,474.00
Taxes and public revenue	89,014,716	17,802,943.20
Colony of Fernando Po	666,000	133,200.00
Total	514,298,464	102,859,692.80

B.—BUDGET OF RECEIPTS.

Items.	Pesetas.	Dollars.
Taxes	262,500,932	52,500,186.40
Imposts	134,723,000	26,944 600 00
Customs	135,000,000	27,000,000.00
Monopolies	217,262,950	43,452,590.00
State property and rights	33,379,090	6,675,818.00
Public treasury	66,655,000	13,331,000.00
Total	849,520,972	169,904,194.40

A comparison of the two gives—

Expenditures and receipts.	Pesetas.	Dollars.
Expenditures	852,885,670	170,577,134.00
Receipts	849,520,972	169,904,194.40
Deficit	3,364,698	672,939.60

The budget was read in the House of Deputies by the minister of finance on the 14th of March, taken in charge by the budget committee, and reported back on the 18th of May with the following changes:

In the budget of expenditure, section 4, ministry of war, an increase of 36,863.75 pesetas, or $7,372.75.

Section 6, ministry of the interior, an increase of 27,525.99 pesetas, or $5,505.19.

Section 7, ministry of public works, a decrease of 32,790.62 pesetas, or $6,558.12.

Section 8, ministry of finance, an increase of 9,250 pesetas, or $1,850.

Section 9, expenses of taxes and public expenses, an increase of 8,795.69 pesetas, or $1,759.13, which makes the total budget of expenditure reported from the committee 852,935,315 pesetas instead of 852,885,670 pesetas, an increase of 49,645 pesetas, or $9,929.

In the budget of receipts in charge of the bureau of taxes, a decrease of 207,570 pesetas, or $41,514.

Receipts in charge of the bureau of state properties and rights, an increase of 283,351 pesetas, or $56,670.20, making an increase over the budget of receipts presented by the minister of finance of 75,781 pesetas, or $15,156.20.

The general effect of these changes was: Deficit as presented by the minister, 3,364,698 pesetas ($672,939.60); deficit as presented by the committee, 3,338,562 pesetas ($667,712.40). Decrease of deficit, 26,136 pesetas ($5,227.20).

This report, as I have said, was made upon the 18th of May, and the debate which began on the following day upon the budget of receipts continued until the 20th of June, when it was passed by the house and sent to the senate with the following changes from the report:

In the general obligations of the state the appropriation for the legislative bodies was increased from 1,998,285 pesetas ($399,657) to 2,299,205 pesetas ($459,841), an increase of 300,920 pesetas ($60,184).

In the obligations of the ministerial department the ministry of the interior was increased from 29,169,747 pesetas ($5,833,949.40) to 31,985,530 pesetas ($6,397,106), an increase of 2,815,783 pesetas ($563,156.60); and the ministry of public works from 108,545,367 pesetas ($20,709,073.40) to 108,912,367.38 pesetas $20,782,473.48), an increase of 367,000.38 pesetas ($73,400.08), which made the budget of expenditures presented by committee 852,935,315 pesetas, after passage by house 856,419,017 pesetas, an increase of 3,483,702 pesetas ($696,740.40).

In the budget of receipts there was no material change.

In the senate the budget follows the same course as in the house, but the debates are shorter and more unimportant.

In the final settlement of the budget, when it became a law on June 30, the budget of expenditures was fixed at 856,419,017 pesetas ($171,283,803.40), budget of receipts 850,596,753 pesetas ($170,119,350.60), leaving a deficit of 5 ,822,264 pesetas ($1,164,452.80), instead of 3,364,698 pesetas ($672,939.60), which was the deficit in the original presentation to the house of deputies on March 13.

II.—Manner of meeting the estimates.

The budget of receipts (*presupuesto de ingresos*) with which the minister of finance proposes to meet the annual estimate of governmental expenditure is divided, as already stated, into six parts, in charge of the following bureaus:

(1) Bureau of taxes (*direccion general de contribuciones*).
(2) Bureau of imposts (*direccion general de impuestos*).
(3) Bureau of customs (*direccion general de aduanas*).
(4) Bureau of Government monopolies (*direccion general de rentas estancadas*).
(5) Bureau of state property (*direccion de derechos del estado*).
(6) Bureau of the public treasury (*direccion general del tesoro publico*).

The present system of taxation dates from the year 1845, when a sweeping reform was introduced. I shall consider the different divisions in detail.

RECEIPTS IN CHARGE OF THE BUREAU OF TAXES.

In the budget of the year 1887–'88 the receipts under this heading are estimated at 263,293,362 pesetas, or $52,658,672.40, the greater part of which is derived from the following three taxes:

	Pesetas.
Real estate and agriculture	177,000,000
Industry and commerce	43,000,000
Transmission of property	31,000,000
	251,000,000
	$50,200,000

Balance from other sources ..... 22,293,362 pesetas ($4,458,672.40)

The tax on real estate and agriculture is fixed by the law of December 31, 1881, at 16 per cent. of the net annual production value of the property, 15 per cent. of which is for the treasury and 1 per cent. to cover the expenses of collection. It is considered a direct tax, and the provincial deputations are held responsible for its collection. At first the basis of these assessments was the statistics collected by these deputations through the municipal bodies (*juntas municipales*). The result of this system was that the land registers were very imperfect, the property was concealed, and the Government defrauded.

The law of December 16, 1878, was intended to remedy this abuse by compelling land-holders to hand in statements of the value and income of their real property, the municipal bodies being held responsible for their compilation. According to the land registers existing at the time of the law, which had not been changed or amended since 1859, 25,935,360 hectares was declared to be under cultivation, and 2,942,297 hectares to be waste land. As the whole surface of Spain is fixed at about 48,935,360 hectares, the amount of land unreported, and therefore paying no tax, amounted to 43 per cent. of the whole surface.

The law of 1878 was carried out by Sr. Camacho in 1881, who amended it by fixing as a penalty that all municipalities who had not collected the statement of property required should continue to pay the tax of 21 per cent. assessed up to that time, while the others should have the tax reduced to 16 per cent. This resulted in a more energetic action on the part of the municipalities, and a large increase of taxable property, so that the decrease in the amount of the tax has been accompanied by an increase of revenue.

Estimated receipts from this source.

Budget of—	Pesetas.	Dollars.
1877–'78	165,500,000	33,100,000
1887–'88 (under new system)	177,000,000	35,400,000

The source of revenue next in importance under this heading is the tax on industry and commerce *(contribucion de industria y comercio)*, estimated at 31,000,000 pesetas ($6,200,000), the basis of which is the exercise of any profession, trade, or industry. The system of collection has undergone many changes since its introduction in 1845. The assessments are made in accordance with certain tariffs, for the preparation of which two questions are considered; (1) the population of the place where the tax-payer is domiciled, and for this purpose Spain is divided into nine divisions, Madrid and eight others; (2) the character of the trade, profession, or industry. The tariffs being drawn up to apply to every employment are often long and complicated. I select the following as the simplest and shortest, the taxes being given in pesetas:

Bases of population.

Districts.	Blacksmiths who are not veterinary surgeons.	Architects.	Surgeons of second class.	Surgeons of third class, accoucheurs and midwives.	Dentists who are not physicians.	Druggists.
Madrid	55	360	130	85	190	260
Barcelona, Sevilla, Valencia, and all sea-ports whose population exceeds 40,000	56	240	120	75	160	240
Cities not sea-ports and having 40,000 inhabitants and upwards	45	180	87	55	130	180
Not sea-ports and having from 20,000 to 40,000	40	145	75	45	95	145
Not sea-ports, with 1,600 to 20,000	30	120	65	35	65	130
Capitals of provinces not sea-ports, with less than 1,600 inhabitants, and towns of 1,000 to 16,000	25	95	50	30	50	95
Not sea-ports nor capitals of provinces, with 5,401 to 10,000	20	70	40	25	40	70
Neither sea-ports nor capitals of provinces, with from 2,300 to 5,400, and those with less than 2,300 are still head of a judicial circuit or to supply markets	15	45	25	20	20	45
Population of 23,000 and under	12.50	40	20	15	25	40

Bases of population—Continued.

Districts.	Master masons.	Medical surgeons.	Physicians.	Bleeders, nurses, and corn doctors.	Teachers of music.	Veterinary surgeons.
Madrid	160	360	200	65	65	95
Barcelona, Sevilla, Valencia, and all sea-ports whose population exceeds 40,000	125	240	180	55	55	90
Cities not sea-ports and having 40,000 inhabitants and upwards	105	180	165	45	46	85
Not sea-ports and having from 20,000 to 40,000	95	145	140	35	40	75
Not sea-ports, with 1,600 to 20,000	85	120	115	30	35	55
Capitals of provinces not sea-ports, with less than 1,600 inhabitants, and towns of 1,000 to 16,000	70	95	85	25	30	45
Not sea-ports nor capitals of provinces, with 5,401 to 10,000	55	70	65	20	25	35
Neither sea-ports nor capitals of provinces, with from 2,300 to 5,400, and those with less than 2,300 are still head of a judicial circuit or to supply markets	45	45	40	15	20	30
Population of 2,300 and under	40	40	35	10	15	25

The above gives a good example of the system and proportion of the tax. Another peculiarity in its method of collection is that the tax-payers form themselves into different corporations or guilds (*gremios*) according to the trade or profession they follow. Each guild is responsible for the gross amount rated per capita according to the tariff under which the trade, industry, or profession falls. A committee, however, decides the quota that each member is to pay, but not assessing any member at higher rates than eight times the amount fixed by the tariff, nor any lower rate than one-eighth part.

In addition to the basis fixed by the tariff the committees take into consideration the amount of business, extent of practice, or general prosperity of the members.

The latest amendments of any importance to the methods of collecting the tax on industry and trade are made by the law of December 31, 1881, introduced by Señor Camacho, which gives the Government in certain cases the right to go outside of the tariffs fixed by population and take into consideration the prosperity of a place owing to its position or to certain special reasons, and also relieves of the tax any new manufacture or industry during the first year.

Fees levied on the transmission of property are estimated in the budget at 31,000,000 pesetas ($6,200,000) These raise in proportion to the degree of relationship.

By the law of December 31, 1881, in the direct line of succession, when the heir is legitimate, the tax is 1 per cent; when illegitimate, 2 per cent. Between a married couple, 3 per cent. Collateral relationship is run out from the second degree at 4 per cent., to the fifth, at 7, 1 per cent. being added for each degree of distance; from the sixth to the tenth degree, 9 per cent., and beyond the tenth degree and strangers, 9 per cent.

Upon money left to be expended for the repose of the soul of the deceased the Government levies the heaviest tax, 12 per cent.

The balance of revenue to be collected by the bureau of taxes after deduction of the sum derived from the three sources, amounting to 22,293,362 pesetas ($4,473,332), is made of taxes on mines, titles of nobility, consular fees, receipts from Government schools and penal establishments.

RECEIPTS IN CHARGE OF THE BUREAU OF IMPOSTS.

These receipts are estimated at 134,723,000 pesetas ($26,944,600), the greater part of which is levied as follows:

Taxes.	Pesetas.	Dollars.
Octroi or consumption tax	93,000,000	18,600,000
Tax on salaries of Government officials	17,500,000	3,500,000
Tax on railway tickets and transportation	12,000,000	2,400,000
Tax on certificates of fidelity (*cedulas personales*)	8,000,000	1,600,000
	130,500,000	26,100,000
Balance from other sources	4,223,000	844,600
Total	134,723,000	26,944,600

The consumption tax, established by the law of May 23, 1845, was suppressed in 1855; re-established in 1856, suppressed again in 1868, and again introduced in 1874. With some changes and additions, the following tariff established in 1876 still exists as the basis of assessment:

[In centimes.]

Division.	5,000.	From 5,001 to 12,000.	From 12,001 to 20,000.	From 20,001 to 40,000.	40,001 to 100,000.	100,001 and upwards.
Beef:						
Fresh ....kilogram..	5	7	9	10	11	12
Salt or dried....do....	8	9	10	11	12	15
Meat:						
Mutton, fresh....do....	5	7	9	10	11	12
Salt or dried....do....	8	9	10	11	12	15
Pork:						
Fresh....do....	8	9	10	11	12	15
Salt....do....	11	10	15	16	18	20
Oil....do....	8	9	10	11	12	13
Aguardiente, liquors, alcohol....do....	60	61	62	63	65	66
Liquids, every grade, on 100 liters:						
Wines of all classes....do....	2.50	5.00	6.25	8.75	10.00	12.50
Vinegar, beer, cider....do....	1.25	2.50	3.12	4.38	5.00	6.25
Rice and beans....100 kilograms..	1.12	1.12	1.12	1.15	1.20	1.25
Wheat and wheat flour....kilogram..	1	1.00	1.00	1.05	1.10	1.25
Grain:						
Barley, rye, corn....do....	30	30	30	40	45	50
Other grains and dry vegetables....do....	20	20	20	22	23	25
Fish:						
River....do....	3	4	4	8	10	12
Sea	1	1	1	2	3	4
Common salt	9	9	9	9	9	9
Soap, soft or hard	7	7	7	9	9	11
Coal, vegetable....100 kilograms..	20	20	20	30	30	30
Wax and wooden matches in boxes, containing as many as 100, 12 dozen of boxes	25	30	30	40	45	50

The tax on salaries of Government employés 17,500,000 pesetas seems an absurdity. If the salary of an employé, is too high it should be reduced; if a sum that is proper or too low, it certainly should not be diminished by taxation. Until Señor Camacho introduced a series of laws in 1881 for improving methods of taxation, to several of which I have already referred, this tax was very oppressive, increasing in an ascending scale by sums proportionate to the amount of salaries. For example, to 1,500 pesetas inclusive, 15 per cent.; from 1,501 to 10,000, inclusive, 20 per cent.; from 10,001 and upwards, 25 per cent. The above-named minister did the best he could to ameliorate the system by the law of December 31, 1881, now in

force, which substitutes a single tax of 10 per cent. for the above method of assessment.

The tax on railroad tickets and transportation of merchandise, 12,000,000 pesetas ($2,400,000), is derived from a tax of 10 per cent. on all travelers' tickets, which rate was fixed by the law of December 26, 1872. There is also a tax of a certain number of centimes on the amount paid for transportation of goods; for example, 25 centimes (5 cents) for every 25 pesetas ($5) paid for such transportation.

Certificates of identity (*credulas personales*), 8,000,000 pesetas ($1,600 000), from the other important item of revenue under this heading. These documents have taken the place of passports, and every Spaniard or foreigner domiciled in the country must be provided with one as a means of identification. The present price of a *cedula*, fixed by the law of May 27, 1884, is divided into eleven rates, ranging from 50 centimes (10 cents) to 100 pesetas ($20), according to the income of the person and the number of inhabitants of the place where he is domiciled.

The remaining revenue under this heading, 4,223,000 pesetas ($844,600), is derived from taxes upon indemnities paid to the state (*cargas de justicia*) upon sugar produced in the peninsulas and upon fees of registers of property.

RECEIPTS IN CHARGE OF THE BUREAU OF CUSTOMS.

These receipts are estimated for 1887–'88 at 135,000,000 pesetas ($27,000,000).

The itemized estimates are as follows:

Sources of revenue.	Pesetas.	Dollars.
Import dues	94,000,000	18,800,000
Export dues	100,000	20,000
Tax on loading ships	3,400,000	680,000
Tax on unloading ships	3,600,000	720,000
Travelers	300,000	60,000
Quarantine dues	160,000	32,000
Share of fines and value of goods abandoned	400,000	80,000
Colonial produce	28,400,000	5,680,000
Extraordinary tax on value of certain articles imported	3,900,000	780,000
Miscellaneous	740,000	148,000
Total	135,000,000	27,000,000

RECEIPTS IN CHARGE OF THE BUREAU OF STAMPED DUTIES AND GOVERNMENT MONOPOLIES.

These are estimated at 217,262,950 pesetas ($43,452,590).

Sources of revenue.	Pesetas.	Dollars.
Stamp duties: Stamped paper, various products, permits to use firearms	48,800,000	9,760,190
Tobacco guarantied by contract	90,000,000	18,000,000
Lotteries	77,005,000	15,401,000
Salt	1,220,000	244,000
Miscellaneous	237,950	47,400
Total	217,262,950	43,452,590

An important change in this section was made during the session of the Cortes just closed by the passage of the law authorizing the sale of the tobacco monopoly. The bill was introduced by the pres-

ent minister of finance and became a law on April 14 last. The only bidder for the monopoly was the Bank of Spain, which agreed to pay the Government 90,000,000 pesetas ($18,000,000) per year for the monopoly, and this is the sum estimated.

An examination of the receipts and expenses of this monopoly, as estimated in the budgets of 1885–'86 and 1886–'87, will enable us to see the advantage of the operation to the Government.

Budget of 1885–'86.

Receipts and expenses.	Pesetas.	Dollars.
Receipts from tobacco monopoly	140,000,000	28,000,000.00
Expenses	55,505,937	11,101,187.40
Net receipts	84,494,063	16,898,812.60

Budget of 1886–'87.

Receipts and expenses.	Pesetas.	Dollars.
Receipts	136,000,000	27,200,000.00
Expenses	59,135,329	11,827,065.80
Total	76,864,671	15,372,934.20

The 90,000,000 pesetas ($18,000,000) clear income, therefore, appears to surpass the usual net receipts. In addition to this it enables the Government to estimate as an extraordinary asset for this year the tobacco in its possession, estimated at 40,000,000 pesetas ($8,000,000). This tobacco being the principal and most exacting of the monopolies, its sale results in the suppression of the bureau of monopolies (*rentas estaneadas*) as an administrative department.

For the working of the monopoly a company has been formed and stock issued by the Bank of Spain.

The system of lotteries called (*primitiva*) primitive, where the purchaser played upon a combination of figures, was established by a royal order of September 30, 1763. The system called modern (*moderna*), whose single-numbered tickets are played upon, was introduced by an order of the Cortes, of November 13, 1811. Pious reasons, such as the endowment of hospitals and the succor of orphans, were alleged for their introduction. The first system (*primitiva*) was abolished by a law of May 4, 1867, but added impulse was, at the same time, given to the other system, which now figures as a regular source of revenue to the state.

To arrive at the real pecuniary benefit the amount of money paid in prizes, estimated in article 22, section 7, of the budget of expenditures, at 55,960,000 pesetas ($11,192,000), must be deducted, which leaves 11,045,000 pesetas ($2,209,000), a small sum in view of the evil effects of this institution against which moralists, philosophers, and political economists have so often proclaimed. In the time of the Republic the question of its suppression was agitated, but the temporary abolition of the tax on articles of consumption, and the consequent decrease of revenue in the face of increased expenditure, prevented any action. It is to be hoped, however, that with increasing financial improvement this method of collecting revenue, alike paltry and pernicious, may be abolished.

RECEIPTS UNDER THE CHARGE OF THE BUREAU OF PROPERTY AND RIGHTS OF THE STATE.

In the present budget of receipts this, the fifth division, amounts to 33,379,090 pesetas ($6,675,818), 7,355,000 pesetas ($1,471,000) of which comes from the renting of the quicksilver mines of Almaden and Linares, 8,358,990 pesetas ($1,671,798) from the sale and rent of other state property, and 17,065,100 pesetas ($3,413,020) from the product of the sale of property taken out of mortmain in accordance with the law of 1855. From religious scruples a large number of people were opposed to buying church property, until in 1859 a *concordat* was made with the Pope and his sanction obtained. The sale was on easy terms, and payment was allowed by promissory notes extending over a series of years, so that the receipts from these sales are still a source of revenue.

RECEIPTS IN CHARGE OF THE TREASURY BUREAU.

This division, the sixth (last), is divided into two parts: (1) Ordinary revenues amounting to 26,655,000 pesetas ($5,331,000), 16,500,000 pestas ($3,300,000) of which is for exemption from military service, the rate being fixed at 1,500 pesetas by law of July 11, 1885, and the rest from the mint, post-office orders, and deposits; (2) an extraordinary resource of 40,000,000 pesetas ($8,000,000), being the value of tobacco in the hands of the Government on July 1, 1887, the calculation of which as a source of income results from the sale of the monopoly already explained.

III.—SYSTEM OF LOANS.

The question of temporary credits is so interwoven with the course of Spanish finance that the best explanation of the system is a concise account of the late financial history of the country, and of the devices of which ministers availed themselves since the restoration, for the purpose of extricating the country from its condition of bankruptcy at the beginning of the reign of Alfonso XII.

Estimated receipts and expenditures of the Spanish treasury.

Year.	Receipts.	Expenditures.
1835	$38,000,000	$42,950,045
1837	53,650,000	78,500,000
1841	41,250,000	50,000,000
1842	43,900,000	63,900,000
1843	43,350,000	63,650,000

In 1846 an equilibrium was nearly established, the receipts amounting to $63,250,000, expenditure to $61,350,000. Following merely the progression of the expenditure from $61,950,000 in 1852, it reached by rapid strides—

In 1857	$99,550,000
In 1861	118,050,000
In 1864–'65	127,950,000
In 1865–'66	137,350,000

During the reign of Isabella II there had, therefore, been a continued increase of expenditure while the wealth of the country had remained almost stationary, and the public debt had expanded from

$350,000,000 at the beginning of the century to $1,150,000,000, in spite of prosperity, credit operations, and the abolition of mortmain. For the purpose of showing the further financial decay, hurried on by the disturbed condition of the country and the successive changes of government between the fall of Queen Isabella in 1868 to the restoration of the Bourbons in 1875, the following comparison is made:

State debt (*Deuda del Estado*):	
On September 30, 1868—	
In circulation	$940,069,200
As guaranty for treasury obligations	122,128,800
	1,062,218,000
On February 29, 1876	1,803,301,620
As guaranty	475,276,850
	2,278,578,470
Situation of the treasury:	
On December 30, 1868, liabilities	125,720,010
On 29th of February, 1876, liabilities	283,760,185

Therefore the state debt in circulation was increased by over $860,000,000, and the treasury debt by more than $158,000,000. This great addition was chiefly produced by the necessity of raising money at excessive rates of interest for the purpose of meeting the expenses of the Cuban insurrection and the Carlist war.

The amount of the debt, therefore, at the beginning of the reign of Alfonso XII may be roundly estimated at $2,500,000,000, on which the country was unable to pay interest.

The problem for the consideration of the ministry of finance of Alfonso XII was, therefore, most serious. In addition to the consolidated debt, the so-called floating debt, which is the term applied to the obligations resulting from temporary loans, made this problem still more complex. The floating debt should only be contracted to enable the Government to meet its obligations before collecting its income; but in this country not only payments of this kind, but all the credits against the treasury and money due from it for interest, are included in this debt.

At the beginning of the last reign the floating debt amounted to about $145,000,000, and required the discovery of some immediate expedient for its payment. Recourse was had to an institution of great financial strength, which is every year playing more important part in the history of this country—the Bank of Spain.

For the purpose of meeting the floating debt in 1876, the minister of finance, with the approval of the Cortes, mortgaged the tax on real estate, and the tax on commerce and industry, which I have considered above, to the bank for a period of twelve years. The bank issued obligations for $116,000,000 at 6 per cent., on the condition of retaining annually the sum of $14,000,000 for interest and redemption of the obligations. The two taxes above mentioned are, therefore, entirely collected by the Bank of Spain.

As an additional guaranty the Government deposited with the bank 3 per cent. consolidated bonds and treasury notes, which were in its possession and in that of the Bank of France. As soon as the obligations of the bank were redeemed, these 3 per cent. and treasury bonds were released, and as the amount, $116,000,000, produced by the agreement with the bank was not sufficient to meet the floating debt, $145,000,000, the Government was further authorized by

the Cortes to use them to meet the remaining requirements of the floating debt.

On the entrance into power of Señor Sagasta, in 1881, Señor Camacho was appointed minister of finance, and he introduced a series of bills for improving the collection of the revenues and for reducing the debt to dimensions that might be grappled with. Consideration was first given by the Government to the redeemable debt, which, at this time, was as follows:

Redeemable debt.

	Nominal value.	Real value.
Bank and treasury obligations	$70,570,000	$70,570,000
Customs obligations	23,410,000	23,410,000
Treasury notes	65,338,900	65,338,900
Deposits	5,189,100	5,189,100
Redeem 2 per cent. exterior at 50 per cent.	49,540,640	24,770,320
Redeem 2 per cent. interior at 50 per cent.	95,017,760	47,508,880
For public works, 70 per cent	2,109,800	
For roads:		1,603,068
April 1, 1850, at par	457,000	457,000
August 31, 1852, at 80 per cent	1,149,100	919,280
July 25, 1855, at 80 per cent	30,500	24,400
June 6, 1856, at 80 per cent	303,300	242,640
Material of the treasury	29,600	29,600
Treasury personal, 80 per cent	1,700,000	1,360,000
Floating debt at par	63,000,000	63,000,000
Total	377,845,200	304,423,188

Attention is called to the enormity of the floating debt in spite of the operation of 1876, which I have already described.

For the purpose of meeting this debt the Government was authorized by the law of December 9, 1881, to issue 4 per cents, redeemable in forty years, for the nominal sum of 1,800,000,000 pesetas ($360,000,000), which were negotiated at 85, and therefore produced 1,530,000,000 pesetas ($306,000,000), which met the redeemable obligations, $304,423,180; 1,522,115,900 pesetas paid the expenses of the operation and other contingent expenses, and left a balance of 940,530.30 pesetas ($188,106.06).

The consolidated debt was converted as follows:

INTERIOR DEBT.

In circulation on making the conversion:	
3 per cent. consolidated	$601,279,800.00
Obligations issued in favor of individuals	41,686,099.60
Obligations issued in favor of civil corporations	141,979,101.20
Obligations issued in favor of railways	242,208,400.00
	1,027,153,400.80
The nominal value of the 4 per cent. into which these were converted	450,724,000.00
Balance	576,429,400.80

EXTERIOR DEBT.

In circulation at time of conversion	$882,600,000.00
4 per cent. issued for conversion of above	394,230,200.00
Reduction in the exterior debt	488,369,800

SUMMARY.

Total of the perpetual debt in circulation	$1,909,753,460.80
Total of the 4 per cent. issued	836,954,200.00
Balance	1,072,799,200.80

The above tables represent the debt of Spain as it stands to-day. In 1874 the service of the public debt was suppressed entirely. In 1875 an agreement was made with the bond holders to pay 1 per cent., and in 1876 a promise was given to advance this to 1¼, beginning with 1882. In the meantime the above-described conversion took place, and the security resulting from it stood in June 30, the close of the fiscal year, as follows:

Perpetual debt 4 per cent., interior	66.75
Perpetual debt 4 per cent., exterior	68.80
4 per cent. redeemable	82.80

The difference in favor of the 4 per cent. exterior is due to an agreement with the foreign bond holders, making them untaxable. This agreement does not exist with the holders of the internal bonds, and suggestions have been made as to the advisability of the levying a tax upon them.

It has been seen that the floating debt is the only system of temporary credits. Every budget now contains an authorization to the Government to contract a floating debt to the extent of 25 per cent. of the budget, and this is the great resource for meeting extraordinary expenditures and deficits. The Government carries its account with the Bank of Spain, which is fast assuming the financial management of the country. In 1876, as already explained, it began to collect the direct taxes, and in 1881 it carried out the details of the conversion of the debt. By the purchase of the tobacco monopoly, it relieved the Government of the collection of what was one of its most important revenues. In addition to this, by a bill presented to the Cortes by the minister of finance on June 23, which was not acted upon by that body, through want of time, the bank becomes the general treasury of the state.

The bank is to have at the disposition of the Government for a floating debt a sum equal to its capital and reserve, 175,000,000 pesetas ($35,000,000), at 1 per cent. less interest than that levied by the bank in other operations. The existing balance of the floating debt is consolidated for five years, and is represented by paper redeemable every three months, at the will of the minister of finance. The bank collects the revenues and binds itself to settle the liabilities of the state as they become due, whether or not there are Government funds on deposit. A settlement is made every three months. Any balance in favor of the state goes to reduce the floating debt. If the balance is against the state the floating debt is increased by paper of the treasury, payable in ninety days, and representing the balance. When the floating debt exceeds 175,000,000 pesetas ($35,000,000) the minister of finance can issue treasury obligations at a stipulated interest, to be negotiated by the bank for the settlement of the excess.

The bank also assumes the duty of payments on bonds held abroad. These payments are to be made in Paris, London, Berlin, Frankfort, Amsterdam, Brussels, Lisbon, and any other points designated by the Government, but the latter must pay exchange and commission established by certified accounts and vouchers.

There seems no doubt that this law will be passed very soon after the beginning of the next session of the Cortes, and with its passage all treasury operations pass under the control of the Bank of Spain, except the management of sums deposited for Government contracts (*caja de depositos*) and the post-office orders (*giro mutuo*), both comparatively unimportant. This policy has simplified the ad-

ministration of the treasury, but it excites apprehension in the minds of some that so much power is intrusted to the Bank of Spain. Certainly it seems probable that at no distant date the signing of promissory notes will be the most onerous duty of the Spanish minister of finance.

The short and imperfect review that I have given shows, however, that there has been a great improvement in the financial condition of the country since the restoration. Still the budget is, to a certain extent, the result of the ingenuity of each individual minister of finance. Recourse for pecuniary difficulties is had to the floating debt until the country becomes so involved that the only method of escape is by some financial operation. In the budget of receipts of this year, which I have examined, the extraordinary resource of 40,000,000 pesetas ($8,000,000) from the value of the tobacco in the possession of the Government, is a source of income only available for this year. Within the next six months, in the preparation of the budget of 1888–'89, the minister of finance must look to some other device to stop the gap.

It is to be hoped that continued tranquillity of government, improved methods of administration, with the accompanying developments of the great resources which the country undoubtedly possesses, will relieve the minister of the necessity of exercising his ingenuity upon the financial problem created by past deficits without consideration or security for the necessities of the future.

EDWARD H. STROBEL,
Secretary of Legation.

LEGATION OF THE UNITED STATES,
MADRID, *August* 30, 1887.

SWEDEN.

REPORT OF MINISTER MAGEE.

The annual budget of the Kingdom of Sweden is subdivided into nine general heads. They are—

(1) The royal household, and for maintaining the various palaces.
(2) The department of justice.
(3) The department of foreign affairs.
(4) The department of war.
(5) The department for the marine.
(6) The department for the interior.
(7) The department for finance.
(8) The ecclesiastical department (embracing schools, churches, and the poor).
(9) The department for pensions.

Each one of these departments is presided over by a minister or secretary, except that of the first named, whose affairs are administered by the riksmarshal and the chamberlains of the court.

The heads of departments constitute the council of state or cabinet. They are directly responsible to the King, who has the power of appointing and removing without interference from the Diet.

All departments are further subdivided into bureaus in charge of chiefs. Prior to the meeting of the Diet, in each January, estimates for the ensuing fiscal year are made by the chief of each bureau to the head of the general department. These aggregated estimates are considered in the council of state, and after the amounts required for

the use of the several departments have been agreed upon by the council, they are, by the prime minister, on the opening day of the Diet, in the presence of His Majesty and the members of the two chambers, read over, after which a copy is given to the respective presiding officers of the two chambers of the Diet, who subsequently present them to the separate chambers themselves. No formal bill is introduced. The budget has precedence over all other legislation, and must be considered and adopted in joint meeting of the two chambers. All laws raising a revenue, or authorizing the expenditure of the same, must be considered in joint convention of the two chambers. It is within the power of the Diet to make any changes in the estimates as asked for by the Government. After the Diet has approved the estimates and the King affixed his signature, they become the law, and the future disbursement is left to the several chiefs of departments.

These disbursements are made as the service may require.

To meet the estimates the Government has twenty-five principal sources of revenue. The most important of these are: Taxation of lands, personal property, incomes, profits from state railroads and telegraphs, tax on spirits (alcoholic), import duties, post-office revenue, bank revenue, etc.

For the year 1886 the total amount derived from all sources of governmental revenue, including surplus, was $22,832,250. The largest source of revenue is derived from custom dues, amounting in 1886 to $7,730,000, while the next largest item is the tax on spirits, furnishing in 1886 $3,510,000

The total estimates granted for the year 1886 amounted to $19,639,800, leaving a surplus of $3,192,450, including a surplus of former years. This surplus constitutes the fund from which the national debt is paid.

Taxation is fixed upon values ascertained by a board. The rate is determined by the Diet, and is hence uniform. Taxes are collected by tax officers, who have the right to distrain property for non-payment of tax. Such sales are non-redeemable. It is not the policy of the Government to carry a large surplus, and the rate is so fixed as to produce only a sum sufficient (creating a small surplus) to meet the requirements of governmental expenditures. Economy is rigidly preached, and salaries, as a rule, are not very high.

The largest expenditure of any one department of Government is that of war, which for the year 1886–'87 is fixed in the estimates at $5,727,450. The next largest is that of the finance department, amounting to $4,020,732. The foreign department costs $166,875.

The expenditures are so arranged that money derived from the various sources of income is always on hand to meet the demands upon the funds. There is no anticipation of revenue, and hence no temporary loans. The national bank is the general depository of all public funds. If an emergency should arise whereby an extraordinary sum would be required, the Diet would be convened and authority given for the creating of a loan, temporary or otherwise.

Each head of a department is charged with the responsibility of its supervision and management, accountable to the King, who can remove or suspend a minister at pleasure.

I will simply add that from my observation the system prevailing here is efficient and economical.

RUFUS MAGEE,
Minister.

UNITED STATES LEGATION,
Stockholm, August 4, 1887.

THE SWISS BUDGET FOR 1888.

REPORT OF MINISTER WINCHESTER.

The Swiss budget, adopted by the federal assembly at its recent session for 1888, is this day transmitted under separate cover to the Department. The report of the federal council, in submitting the budget to the assembly, directs attention to the changes in the arrangement and departmental estimates necessitated by their reorganization, going into effect January 1, which has been explained in previous dispatches.

The budget shows—

	Francs.
Estimated income	56,066,000
Estimated expenditure	56,866,000
Estimated deficiency	800,000

The income is an increase of 2,820,000 francs over 1887, credited to the following sources:

	Francs.
On estate	67,000
Bank-note tax	2,000
Customs administration	1,200,000
Department of exterior	9,000
Department of industry and commerce	30,000
Posts and railways	1,608,000
Military administration	10,000
Total	2,926,000

There is a falling off in receipts from the following—

	Francs.
Invested capital	11,000
Department of interior, from the relinquishment of certain charges heretofore made in the Polytechnical Institution	82,000
Powder administration	13,000
Total	106,000

The report closes with the warning that the deficiency shown by the estimates will be increased by supplementary charges which are unavoidable, and may be safely put at 750,000 to 1,000,000 francs, making the actual deficiency for the year about 1,500,000 francs, subject to a possible increase from customs duties and the postponement of certain expenditures to a future period. The budget for the "spirit monopoly" has not yet appeared, but the estimates submitted to the federal council and approved fixed the receipts at 10,300,000 francs, and the expenses 5,290,000 francs, leaving a surplus of 5,010,000 francs. The estimates cover the first calendar and fiscal year of the operation of the law. Referring to the increase in the estimated receipts from posts and railways, it appears from the railroad statistics for Europe that in extent of miles per 10,000 inhabitants Switzerland is exceeded only by Sweden and Denmark, and in outlay for the same, for each inhabitant, comes second, England being first.

BOYD WINCHESTER.

LEGATION OF THE UNITED STATES,
Berne, January 16, 1888.

GREAT BRITAIN.

TRANSMITTED BY MINISTER PHELPS.

MEMORANDUM.

The Spanish Government ask for a complete collection of the laws, rules, and orders at present in force in the United Kingdom in the matter of public accounts, as also a copy of the budget.

The documents described by his excellency the Spanish minister would be hardly intelligible to persons unacquainted with the English system of finance, and a memorandum has therefore been prepared explaining the main principles of that system, supported by copies of papers to which reference is made in the memorandum.

In foreign countries the term budget, though borrowed originally from English finance, differs materially from the meaning attached to it here. The English budget* is merely the speech of the chancellor of the exchequer when, soon after the close (March 31) of the financial year, he lays before the House of Commons the financial result of the year just expired, the estimates of income and expenditure for the year just commencing, and proposals for increase or diminution of taxation or other changes in financial administration which the Government recommend to the approval of Parliament. This speech is not officially published. It is, in fact, only to be found in the pages of "Hansard's Parliamentary Debates," an unofficial publication, which reports every speech delivered in Parliament. The speech is necessarily but a summary of the figures of the year under consideration, and in this it differs widely from the budget, as generally understood abroad, viz, a large volume, giving in great detail the estimated income and expenditure of the year to which it applies.

The consolidated fund of the United Kingdom is the general account at the Bank of England [in Ireland at the Bank of Ireland] into which all the public revenues are paid, and out of which all the public expenditure is paid.

The consolidated fund account is also known by the name of the exchequer account.

The consolidated fund account for any given year represents, therefore, the receipts and expenditure of the state for the year.†

The Spanish minister asks for the budget of the year 1883–'84. The account for that year is not, however, as yet complete, and, as an example only is required, the budget for the year 1882–'83 is taken instead, and the following description will perhaps render intelligible the method of proceeding from the first framing of the estimates to the closing of the final account. One difference between the English and many foreign systems of finance must be carefully noticed. The English system includes in the accounts of a given year not the payments belonging to the year, but only the payments made in the year. If a salary is due, or a purchase made, on or before the 31st March (the last day of the financial year), but payment for it is not ordered until on or after 1st April, that payment, though for a service belonging to the expired year, is charged to the new year. On this point the English system differs from the French; and though less logical, it satisfies the main requirement of the English public, viz, the speedy closing of accounts.

The expenditure of the year is divided into two classes:

(1) The first consists of charges more or less permanent in their nature, which are authorized by act of Parliament either for a given period or until the act authorizing them is repealed. These charges, therefore, do not form the subject of an annual vote of Parliament, but are paid as they fall due under the authority of the act which grants them. They are called fixed charges on the consolidated fund, and comprise the interest, sinking-fund, and cost of managing the public debt, the

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*The proper phrase, which has now been in use in England for certainly over one hundred and thirty years, is that on such a day the chancellor of the exchequer *opened his budget*—budget being an old name for a bag containing papers or accounts.

† A description of this kind must be somewhat general in order to be intelligible to a stranger, but it should be stated that the war and naval departments are allowed to use, under strict limitation, certain receipts which they realize. These receipts are therefore not paid into the consolidated fund, and form an exception to the general rule.

civil list or dotation of the Crown, the allowances to members of the royal family, certain pensions granted for public services, the salaries of the judges, and of certain high officers, whose independence is thought to be better guaranteed by permanent grant rather than by annual vote.

The only detailed statement of these charges is found in the volume of the "Finance Accounts" which is presented annually to Parliament; a copy of the volume for 1884–'85 is annexed to this memorandum. As an annual vote for these services is not required, no separate and detailed estimate is laid before Parliament, as is the case with the second class of expenditure.

The fixed charges on the consolidated fund amount in round figures to about £31,000,000 a year, or about three-eighths of the total annual expenditure of the state.

(2) The ordinary charges of the military, naval, and civil government of the country, as well as the cost of collecting the revenue, form the second class of the public expenditure. They are annually granted by Parliament, and as they are in the first instance voted by the House of Commons in committee of supply, they are called the "supply services." The estimates for these services for the year 1884–'85 were framed in the months of November and December, 1883. They are contained in three volumes: (1) The Army Estimates; (2) The Navy Estimates; (3) The Civil Service and Revenue Department's Estimates. These three volumes are annexed. The army and navy estimates were prepared by the army and navy departments, were submitted to and approved by the treasury in January, 1884, and were presented to the House of Commons in February, 1884. The estimates for the civil service and the revenue departments were framed by the treasury, and were also presented to the House of Commons in February, 1884.

The supply services amounted to more than £50,000,000, and represent in round figures five-eighths of the public expenditure.

It has been explained that three-eighths of the public expenditure, the fixed charges on the consolidated fund, need no annual vote of Parliament, but that the supply services, or five-eighths of that expenditure, require such a vote, and as Parliament only grants money for the service of the year for which it is intended, it was necessary that money for service of the year 1884–'85 should be granted by the 31st March, 1884, in order to enable the treasury to carry on the public service on and after 1st April, 1884. The supply estimates, it has been explained, were presented to the House of Commons in February, 1884. These estimates are divided into votes (or chapters), and the House of Commons grants the money by votes (or chapters). There are between ten and twenty votes in the army and navy estimates respectively, and about eighty votes in the civil service estimates. Each of these votes is discussed at such length as the House of Commons thinks proper, and any item in the vote can be rejected, but the House of Commons can not add a penny to a vote, it being a constitutional maxim of the state that expenditure can only be voted on the recommendation of the Crown. As matter of practice, money granted on one vote of the army estimates is held to be *ad interim* applicable to any army service, and likewise money granted on one vote of the navy estimates is held to be *ad interim* applicable to any navy service. But money voted on one civil service vote is not, under any circumstances, applicable to another civil service vote. In order, therefore, that the treasury might have funds to begin the year 1884–'85, the House of Commons granted, in March, 1884, one or two of the army votes, one or two of the navy votes, and a sum on account of each civil service and revenue vote, that is to say, about enough to carry on for two months each civil or revenue service which forms the subject of a vote.

It is here necessary to explain the mechanism by which Parliament places money at the disposal of the Executive Government. The process is as follows:

The Government submits an estimate to the House of Commons, which sanctions the expenditure demanded by a vote in supply. The House of Commons then provides the money for the expenditure so sanctioned by vote in ways and means. This vote in ways and means is then embodied in a bill (*projet de loi*), which passes first the House of Commons, then the House of Lords, and, receiving the royal assent, becomes an act of Parliament called a ways and means act. The result is that the House of Commons discusses in detail and sanctions the expenditure, but the money required to meet that expenditure is not available until it has been granted by the two houses of Parliament, and receives the royal assent. To take a simple case: The Government has agreed to buy a picture for £70,000; it presents an estimate to the House of Commons for that sum; the House of Commons in supply sanctions that expenditure, but if it stopped there its sanction would be useless. It therefore next grants a sum of £70,000 in ways and means out of the consolidated fund, but that is not sufficient to open the consolidated fund, and the ways and means vote of £70,000 is therefore embodied in a bill, which is passed by

the two houses, assented to by the Queen, and the sum of £70,000 is then available to pay for the picture. Practically, the only discussion takes place in supply, *i. e.*, at the first step, and when the House of Commons has taken that first step the others follow as matter of course but each step is taken as matter of course, and the student of English finance must master the principle of the law, which is, that no money can be taken out of the consolidated fund except under authority of an act of Parliament. Before the 31st March, 1884, therefore, the sums voted in supply by the House of Commons for army, navy, and civil service in 1884–'85, were granted out of the consolidated fund by a corresponding vote in ways and means, which vote had been embodied in a bill which had duly passed each branch of the legislature and become an act of Parliament. From time to time during the remainder of the Parliamentary session of 1884 the whole of the votes contained in the army, navy, and civil, etc., estimates were sanctioned in supply, covered by votes in ways and means, and embodied in two or three ways and means acts. The last of these acts, which is usually the conclusion of the session, is called the appropriation act; it sets out in detail all the votes which the House of Commons has sanctioned in supply, and appropriates to them, and to them only, the required sums of money out of the consolidated fund. By this act Parliament, as a whole, ratifies the votes of the House of Commons in supply, and provides the sum of money necessary to satisfy the liability thus incurred. A copy of the appropriation act is forwarded.

But it has been stated that the estimates for which money is thus voted were prepared in November and December, and it usually happens that before the end of the session following, viz, the month of August, requirements have arisen which were not foreseen in the November or December preceding. If these arise, supplementary estimates are presented in the month of July, which are discussed and voted after the original estimates and are embodied with the sums voted under the original estimates in the appropriation act. A copy of the supplementary estimates presented in July, 1884, are attached hereto.

But further requirements may arise before the end of the financial year, and in that case a second supplementary estimate is presented to the House of Commons when it meets again in February. This second supplementary estimate is discussed and voted in March, covered by vote in ways and means, and ratified by a ways and means act before the 31st March. A copy of the supplementary estimates presented and voted in February–March, 1885, is annexed.

If the preceding description has been followed, it will have been seen that the control of Parliament over the grant of public money is complete. A fixed charge on the consolidated fund can only be paid under the authority of a special act of Parliament, and a supply service can only be paid after it has been voted in supply and covered by a ways and means act. But it may be asked, how does Parliament secure that the finance minister does not take money from the consolidated fund for purposes which Parliament has not approved? The answer is, that the finance minister can not by himself take money out of the consolidated fund, or, as it is sometimes called, the exchequer. Money is only issued out of the consolidated fund with the permission of an independent officer, who guards the consolidated fund on behalf of Parliament. This officer, styled the comptroller of the exchequer and auditor-general, only obeys the directions of the treasury to make an issue of money out of the consolidated fund (exchequer) when he has satisfied himself that the demand is for a service authorized by Parliament—if a fixed charge on the consolidated fund, by special act; if a supply service, by the appropriation act.

It may next be asked, how Parliament guards against the finance minister demanding and obtaining money out of the consolidated fund for a service authorized by Parliament, but spending it upon purposes other than that for which it was granted. A preventive against such abuse is provided by the exchequer and audit act, which provides for the due rendering by every person intrusted with public money of an account of the disposal of such money to the officer above mentioned, the comptroller of the exchequer and auditor-general, and this memorandum, having described the manner in which the public money is granted during the year for which the grant is made, will now describe the manner in which the money granted for the year 1884–'85 was expended and brought to account.

The grants which have been described are made by Parliament to the Queen, and the Queen by royal order places them at the disposal of her finance department, the treasury. The treasury from time to time, as the money is wanted, directs the comptroller of the exchequer and auditor-general to issue out of the consolidated fund (or exchequer) so much from army votes, so much from navy votes, so much from civil votes, as the case may be, and the money so issued is paid to the account of the paymaster-general. For all ordinary purposes of finance these issues from the consolidated fund or exchequer to the paymaster-general are treated as expendi-

ture. They correspond very closely with the actual expenditure, because at the close of each day the paymaster-general is left with little more than a nominal balance in his hands, and it is generally found that the final audited account of an expenditure of between £80,000,000 and £90,000,000 varies from the account of the issues from the consolidated fund to the paymaster-general by little more than £200,000 or £300,000. The advantage of treating for purposes of ordinary finance the issues from the consolidated fund as if they were final expenditure is, that an account of the state of the national income and expenditure, proved by experience to be, for practical purposes, correct, can be prepared at the close of any day up to the shutting of the books an hour or two previously. The paymaster-general pays all the orders which the different departments draw upon him, whether they are final payments or advances, to other persons who have to expend the money in detail. The comptroller of the exchequer and auditor-general knows, of course, how much he has, at the instance of the treasury, ordered to be issued out of the consolidated fund to the paymaster-general for the service of each department; and, under the authority of the exchequer and audit act, he requires each department so intrusted with public money to account for it, and he examines the accounts thus rendered to satisfy himself that the money has been expended for the purposes for which it was granted; that each payment was made upon proper authority, and is properly vouched. The accounts ought to be rendered within three months, but as much of the public expenditure is abroad, a margin of time is allowed, and, without exception, the accounts of all the departments for the year ending on the 31st March must be rendered to the comptroller and auditor-general by the 30th November following.

He then draws up a report to Parliament on each vote, calling attention to any irregularity. These reports are contained in three volumes called the appropriation accounts. One volume contains the accounts of the army; the second, those of the navy; the third, those of the civil services and revenue departments. The appropriation accounts for the year 1884–'85 are appended. The appropriation accounts are presented to the House of Commons in the following February. Thus, the appropriation accounts of 1884–'85 were presented in February, 1886. The House of Commons refers these accounts to a committee (bureau), which passes the account of each vote in review, and reports to the House of Commons its conclusions; calls attention to any irregularity, and recommends how it should be dealt with. If there is a serious irregularity it is taken up by the opposition in the House of Commons, and is so judged by the House. But minor irregularities and the ordinary recommendations of the committee are considered by the treasury, which issues a minute dealing with each head of committee's report, giving directions to the different departments to carry into effect the report; calling on persons who have not produced proper vouchers or proofs of payment to make good the sums for which they are unable to account; or, if the treasury differ from the committee, asking the committee to reconsider their opinion, with the reasons upon which the request is based.

A copy of the reports of the Public Accounts Committee on the Appropriation Accounts of 1884–'85 is appended.

The memorandum has thus endeavored to trace the public expenditure from the preparation of the estimates to the rendering of the accounts to the auditor-general, the report of the auditor-general to the House of Commons, and the examination of the auditor's report by a committee or bureau of the House of Commons.

The budget speech has been purposely left out of mention, in order not to interfere with the description of the method in which the public money is granted for each year, issued in that year, and accounted for after the close of that year. This administrative machinery would work just the same if there were no budget speech. But that speech, made yearly by the chancellor of the exchequer in the House of Commons, is of the greatest interest to the country. It is a *compte rendu* of the finance of the country and of its material progress. An annual statement, partaking of the nature of the budget, has been made in the House of Commons yearly since the revolution, or for nearly two hundred years. But for many years they were not of the complete and elaborate character which now distinguishes them, while the fact that for many years speeches were not reported, makes it difficult to estimate the value of them. The phrase mentioned above, that the chancellor of the exchequer opens his budget, was in force soon after 1750. The budget speech for the year 1884–'85 was delivered by Mr. Childers in April, 1884, and a copy of it is appended.

This memorandum does not pretend to do more than give a sketch of the English system of account. If there are any points upon which the Spanish minister desires further information, it will be readily supplied.

R. E. WELBY,

[The Times, Friday, April 22, 1887.]

THE BUDGET.

The House having gone into committee of ways and means, the CHANCELLOR OF THE EXCHEQUER, Mr. Goschen, who was received with loud cheers, said—

'I have now to ask the committee to pass from that region of higher politics in which we have been engaged during the past two or three months into the calmer sphere of the discussion of the national balance-sheet. But although the discussion may be conducted, I hope, in a calmer atmosphere, it involves, as every member of this House must be aware, questions reaching deep down into the foundations of the prosperity of the country, and consequently interesting every member of the community. I have, in the first place, according to custom, to call the attention of the House to the expenditure of the past year, but before I do so I should wish to impress one set of broad figures upon the minds of members of the committee, and that is, that in the past year the expenditure and the revenue may be said in round numbers to have reached the figure of 90,000,000. That 90,000,000 admits of easy subdivision, both on the expenditure side and the revenue side. On the expenditure side it divides into two great heads—namely, 30,000,000 for the charges on the consolidated fund, and 60,000,000 for the supply services. On the receipt side 75,000,000 are derived from taxes, and 15,000,000 from non-tax revenue; in other words, five-sixths of the revenue is derived from taxation, and one-sixth is derived from other sources, such as the post-office, telegraphs, and miscellaneous sources of that kind. I now come to the expenditure of the last year.

The budget estimate, as honorable members will see by reference to the papers before them, was £89,610,000. The supplementary estimates amounted to £1,259,000, giving a total estimated expenditure of £90,869,000. The actual exchequer issues were £89,997,000, just £3,000 less than £90,000,000. The result is the exchequer issues were £387,000 more than the original estimate and £872,000 less than the total estimated expenditure, including supplementary estimates. Now, it is interesting to consider how far this reduction of £872,000 under the total estimate is due to real economies in the service and represents so much saved to the nation.

In the first instance, on the consolidated fund charges there is a saving in round figures of £100,000, which is due to the fact that the interest on treasury bills and exchequer bills was taken at a higher figure than ultimately had to be paid. The estimate taken was 3 per cent., but it has been possible to borrow at 2¼ per cent for three months' bills, and 2½ per cent. for six months' bills. The result upon the floating debt is that there has been this saving of £100,000. There is an apparent saving on the army of £263,000, but that does not represent real economy. I have thought that I could illustrate the nature of this apparent reduction to the committee by the following illustration.

Suppose that a man had an agent whose traveling expenses were agreed to be at the rate of £1,000 a year *maximum*. Suppose that he expended only £900, there would be £100 left. That £100 would not be at the disposal of the agent, but would go against his next year's allowance. So it is with the army. It is impossible to foresee the exact amount of money that may be lawfully spent within the year; whatever is saved in this year is carried over to the next year and constitutes, as in the present case, a sum which will relieve the exchequer issues of the following year. I have thought it best to make this explanation, as I believe it sometimes puzzles honorable members. Thus a portion of the vote of credit of the previous year which had not been spent has come into the relief of the exchequer issues. The same applies to a portion of the saving of £347,000 on the civil-service estimates. But here, I am happy to say, the whole apparent reduction is not swallowed up by a matter of account. On the civil-service estimates there has been a real and substantial economy by the departments not having spent all the money which they were entitled to expend under the grants; and there is also in the revenue departments a real saving of £100,000. Adding these savings together honorable members will see that there is a real saving of £400,000 on the past year. The other amounts which are short spent are due rather to matters of account. At all events you arrive at this conclusion—that the expenditure contained in exchequer issues was £872,000 less than the amount which was granted by Parliament.

Turning now to the receipts, honorable members will see that the budget estimate was £89,869,000 and the exchequer receipts were £90,773,000, showing a revenue beyond what was anticipated of £904,000. It will be interesting to the committee to have some explanation with regard to the causes which have brought about that comparatively satisfactory result. It is due to the increase of £681,000 in the produce of taxes and an increase of £223,000 in the produce of non-tax revenue. Looking at the figures themselves, honorable members will see that there is an increase in the customs of £455,000, and a decrease in the excise of £404,000. These are,

together with an increase of £465,000 in stamps, the most interesting points of the revenue of 1886–'87. But the most interesting part of that increase, I think, will be found in the consideration of the revenue from alcoholic drinks—a matter which has always had great interest for the members of this House.

In 1885–'86 the actual produce from alcoholic revenue was £26,898,000, and in the last fiscal year it was £26,690,000, leaving a deficiency of £208,000. Analyzing these figures a little further, I find that the increase on the actual produce of spirits has been on foreign spirits, in which there has been an increase of £408,000, while in home-made spirits there has been a decrease of £548,000. If you take the two together the budget estimate was remarkably accurate, but certain circumstances have disturbed what may be called the internal relations between different forms of alcoholic drink. Beer shows an increase of £45,000; wine a decrease of £93,000. On this matter of spirits I wish to say that the most able officers of the customs and the inland revenue are always unable to say whether the run will be on foreign spirits or on British spirits, nor are they able easily to forecast whether brandy, rum, Geneva, or any other kind of spirit will be the favorite in any particular year. I believe it depends to a considerable degree upon the climate, and I am told that the great increase in rum of £208,000 over the year before is due to the colder weather which we have had. [Laughter.]

Another explanation which is given is that there has been a decline in the price of rum. When the right honorable member for Derby framed his estimates rum was dear; therefore it was thought the increase would rather be in English spirits; but in fact this has not been so, and the consequence has been that the increase has been upon foreign spirits. The revenue from wine, again, has been constantly declining, partly in consequence, as the committee will be aware, of the change in the duty; but above that there has been a constant tendency to decrease in the consumption of wine. From 1877 to 1886 the revenue from wine has fallen off 30 per cent. This is a subject I shall advert to in a later portion of the statement.

Coming to articles of consumption other than alcoholic liquor, there is no increase in the revenue from coffee. The consumption of coffee and the revenue from coffee are less now than they were twenty years ago. On the other hand, the consumption of cocoa and the revenue from it have doubled within the last fifteen years. The consumption of tea has doubled between the years 1857 and 1887. In 1857 the consumption was 2.45 pounds and in 1887 it is 4.87 pounds per head of the population. [Hear.] Looking at the position of our Indian Empire, we may congratulate ourselves upon the following facts with regard to the consumption of tea:

Whereas ten years ago we received 156,000,000 pounds from China, and 28,000,000 pounds from India, or 184,000,000 pounds altogether, in 1886 we received 145,000,000 pounds from China and 81,000,000 pounds from India. [Cheers.] It would be extremely satisfactory to the chancellor of the exchequer if great general advantages were always accompanied by fiscal advantages; but I am sorry to say that that is frequently not the case.

In the same way that we rejoice over the progress of the temperance movement, in spite of a loss to the revenue, so in the transfer of consumption of tea from the tea of China to that of India we have to put up with a loss of revenue, owing to the curious fact that the teas of India are stronger than the teas of China, and therefore go further, so that a smaller quantity of tea is required to make the same number of cups of tea. [Hear, hear.] The consequence is that the consumption of tea as tested by the weight disposed of per head of the population is not so great at present as it used to be, and the rate of progress is not so great as it used to be. The only remaining notable increase in revenue is due to the item of stamps. The increase is about equally divided between the death duties and the stamp duties proper.

The increase in the death duties is due to the falling in of some heavy legacies; but there is a further increase which is due not to expanding revenue, but to the collection of arrears. By the adoption of a better system of collection, income tax and death and other duties are collected much more closely than they used to be, and so you find that what you would at first believe to be an increase of revenue, due to increasing wealth and prosperity, represents little more than the increase of energy on the part of the officers of Somerset House. There is a sum of £76,000 in this £465,000 which is assigned to this cause. I have mentioned the heavy legacies; and there is also a more satisfactory cause for the increase, inasmuch as it is a permanent source of increase—namely, that the receipts have been sensibly affected by an improvement in business. There have been more transactions which have required stamps, and particularly an exceptional number of foreign bonds to bearer which have been presented to be stamped. These are, I think, the main incidents in the revenue of last year with which I need trouble the committee.

I now come to the point of the final result of the past year. It will be remembered that the surplus was estimated by my right honorable friend, the member

from Derby, at £259,000 at the beginning of last year, and the supplementary estimates were £1,259,000. If you deduct that from the estimated surplus, there was a deficiency of a million on the expenditure, but there were savings to a total of £872,000, which reduced the deficiency to £128,000. The excess of the actual yield of revenue over the estimate I have stated at £904,000, which converts the deficiency into a final surplus for the past year of £776,000, as against the anticipation of my right honorable friend of £259,000. I think the committee will admit that, on the whole, looking to the events of the year, that is a satisfactory result. [Hear, hear.] This result is due in the very smallest measure to the present chancellor of the exchequer. But it is due in the first instance to the chancellor of the exchequer who made such accurate provisions which have been so satisfactorily justified, and, in the second place, to the chancellor of the exchequer, my noble friend, the member for Paddington, who was mainly responsible for the greater part of the financial year and who has rendered such successful service to the cause of economy. [Cheers.] Now, I will state—and it is always a matter of interest to the committee—how this affects our balances.

We began the year with a balance of £5,626,000. We took out of balances, principally for advances to local authorities for local loans, £452,000, leaving a balance of £5,174,000, and adding to that the surplus of £776,000, we have a balance—a very creditable balance I hope the committee will think—at the end of the year of £5,950,000, which is an increase of £324,000 over the year before. We have paid off debt during the year to the amount of £6,046,000, and, if I add the amount by which the balances are increased and which is equivalent to a diminution of debt, the real reduction of debt is £6,370,000. But I hope the committee will not run away with the idea that because in the last year there has been this satisfactory balance of £776,000, therefore we can look at the financial situation of the country with absolute complacency. I should wish, with the indulgence of the committee, to examine in some detail the position in which we stand as regards our resources, and the calls made upon them. I should wish to make some general observations on the expenditure and revenue for a certain period of years.

With regard to the army and navy there has been considerable discussion, and I do not wish to dwell at length upon this point; but I would simply call the attention of the committee to the fact that during the last two years and during the present financial year which we have now commenced we have to bear a heavy extra charge. Let us hope it may be an extra charge and not a recurring charge. This extra charge is due to that which is popularly known as the naval scare of November, 1884, and if I call it a naval scare I do so without intending to imply either that it was justified or that it was not justified. I simply refer to it as a historical event. In that year the proposal to increase the navy amounted to £3,100,000 on ships and £1,600,000 on armaments. But I believe it is not unfrequently the case that such estimates expand during the course of their being worked out. In this case the estimates for ships expanded to £3,600,000, and when the authorities of the time had to deal with the armaments it was found that the estimate had not included the necessary amount of increase for new ammunition, and that involved a further sum of £500,000. We arrive, therefore, at this result, that, whereas the original estimate was £4,700,000, the total extra expenditure is £5,700,000 in round numbers.

The admiralty have carried out the programme with considerable vigor and rapidity; and while it was the intention of Lord Northbrook that this additional sum should be divided over five years, the increased sum has been spread over and will be discharged in only three years. [Cheers.] The committee will see that that involves a heavy sacrifice to the tax-payers during the last two financial years and this year. The increase due to that historical event on navy votes alone has been more than one million during the past two financial years, and involves £900,000 in the present financial year. Let honorable members, therefore, keep in mind when they are looking at the estimates for the navy that those estimates have been increased by that which has been a temporary and, I hope, an exceptional outlay. The same may hold good for the armament of the navy.

The army estimates this year include no less a sum than £1,700,000 for naval armaments. Looking at this extra ship-building programme there fortunately remains only £200,000 for completion in the year ensuing, so far as ships are concerned. So that we may look forward, I trust, to the fact that at the end of this financial year we shall have arrived at a great diminution of the necessary charge which has been made upon the tax-payers by these exceptional circumstances; and I am glad to be able to state that the arrangements which are being made about the fast merchant steam-ships, adapting them at a very small cost to the state for naval purposes, and the arrangements with the colonies, afford good reason to hope that the time is not far distant when we may relieve the naval estimates of that exceptional burden which has fallen so heavily upon the tax-payers during the past two years.

Now I pass away from the expenditure on the army and navy—in regard to which I hope and believe that it will be possible to make considerable reductions in the future—I pass from that point to the civil-service estimates, to which I should wish to be allowed to call the particular attention of Parliament, because here the intervention of Parliament is involved quite as much and, I believe, more than the action of successive governments.

Last year the civil-service estimates were £17,827,000. This year, notwithstanding the constant automatic increase, as it is called, for education and other services over which the departments have no control at all, the amount is £17,931,000, showing only an increase of £104,000. And here I wish to say that to a large extent the smallness of this increase in the prospective estimates of this year is due to my honorable friend the secretary to the treasury, who has been through these estimates with the greatest care and who has subjected them to as rigid an examination as ever they have before received. [Cheers.] Now let us look back to the first year of the new system established after the exchequer and audit act of the year 1868–'69.

In 1868–'69 the estimates for the civil service were £9,173,000. Now they are £17,931,000. You must deduct some items owing to change of account, but a genuine increase remains of £8,079,000, or 88 per cent. The first impression of the committee may be—what extravagance has been committed by successive governments in that respect; but I would call their most particular attention to the origin of that increase and to the parties who are really responsible for it. It is not due to the fact that the business of the state has been conducted in a more costly manner [hear, hear], but that new functions are constantly being forced upon the state and that new services are being demanded of the state by the voice of Parliament. Parliament, acting under the pressure of public opinion, has been constantly imposing new duties upon the state and compelling it to bear in whole or in part the burden of work hitherto falling on local authorities or private individuals or that has not been performed at all. It is for Parliament in the future to decide to what extent it will continue that policy, but it is my duty as the present guardian of the public purse to call attention to the result of that legislation, so far as expenditure is concerned, and to show that this legislation—in many respects beneficial legislation—has added 88 per cent. during the course of years to which I have referred to the cost of the civil service. It is a remarkable fact that out of the increase of £8,079,000 no less a sum than £7,605,000 is due to the direct action of Parliament and only £474,000 is an administrative increase. If a deduction is made for an increase of £629,000 on the cost of Irish police, there is an absolute saving during the period of more than £150,000 of what may be called the cost proper of the public departments. It is not due to the administrative services, and the saddle should be put upon the right horse. It is no use denouncing the costly system of government from year to year and in department after department when fresh duties are constantly being thrust upon the state, frequently in opposition to the views of the existing Government of the day. Of the increase I have mentioned there was due to new services imposed upon the Government by Parliament £5,057,000, and to the automatic increase in services previously imposed £2,548,000. Classified according to its nature, educational services have cost £4,153,000. This refers not only to education, but to the surroundings of education, such as the science and art department at Kensington, and it is that portion of the increase which is due to the action of Parliament since 1868.

There was in relief of local taxation £2,548,000 [hear, hear], miscellaneous services, £612,000. Education includes primary education in Great Britain, Irish industrial schools, reformatories, science, and art, etc. Relief of local taxation includes police, pauper lunatics, roads, prisons, etc. Miscellaneous includes mines and factory inspection, fishery inspection, Irish land commission, crofters commission, wrecks commission, registrars of friendly societies, registrars in bankruptcy, and surveys of the United Kingdom. I am not saying that every one of those services is not a valuable service, but I am only reminding you that they are now performed by the state; previously they were performed by local bodies or were not performed at all.

I will now show that, although our finances are not in that entirely unsatisfactory position which some people believe, they are not in such a flourishing condition as we could wish, and yet there is not a single object in which honorable members take an interest as to which they are not urging on the chancellor of the exchequer claims for support. [Hear, hear.] Persons interested in art want grants to be made to the national gallery or money to be given for the purchase of the pictures or other objects which may be for sale in the market. My right honorable friend (Mr. Mundella) is going to press me heavily for technical schools and university colleges [hear, hear], and I am also pressed for colonial defense and other matters. [Hear, hear.]

I hope I have succeeded in placing before the committee the growing nature of the civil-service expenditure quite apart from any question of army or navy, which are the departments which generally occupy the attention of the House. I think I have shown the committee that the expenditure of the country is—I may say at least—very elastic, that its growth is certainly large and automatic, and that, besides the automatic, there is an artificial growth. I wish I could turn from the expenditure side, which I have characterized in those terms, to the revenue side, and say that there, too, we have got the necessary elasticity which would enable us from year to year to make head against those increasing changes. But that unhappily is not so.

On the side of revenue I would wish to call the most serious attention of the committee to some facts. I have made a calculation with respect to the progress of the produce of the taxes under the main heads of customs, excise, stamps, and house duty. I will deal with income tax separately. That fluctuates to such an extent according to the number of pennies imposed, that it is not a fit subject to be included in my present comparison. I have started with the produce of these taxes in 1859–'60 and bring the calculation down to the past year, taking periods of five years up to 1884–'85, and then taking 1885–'86 and 1886–'87. I am going to state what the same taxes have yielded at different times in order to show whether there is that elasticity in the revenue which we might have hoped for and to which we used to be accustomed. The net amount is given.

In the first period—I will take the years, beginning with the 1st of March, between 1860 and 1865—the produce of these taxes increased 10.8 per cent.; in the next period, from 1865 to 1870, it increased 9.9 per cent. Then we come to the flourishing period between 1870 and 1875, when the increased produce of the same taxes was 24 per cent. During the next period, from 1875 to 1880, there was no increase at all, but a decrease of 3.9; but between 1880 and 1885 there was an increase of 5.8 per cent. In 1885–'86 there was a decrease of 3.7 per cent.; while in the past year there was an increase of less than 1 per cent. [Hear, hear.]

I do not know whether the committee grasp at once the significance of those figures. It is that in the early periods the produce of the taxes was developing very much faster than the growth of population, whereas during the later periods the produce of the taxes was scarcely increasing at all. The calculation I have made does not take into account the increase of the population. If we look to the best of those periods, the period from 1870 to 1875, the increase was, as I have said, 24 per cent., while the population increased 5 per cent. Therefore the ratio of increase in the produce of the taxes was nearly five times as large as that of the population. But in the last year the increase was not quite in proportion to the increase in the population, and in the year before there was a large decrease as compared with the increase of population.

Mr. MUNDELLA. Alcohol.

The CHANCELLOR OF THE EXCHEQUER. Well, alcohol will account for a good deal of it. But while we have lost a great deal upon alcohol we have not gained sufficiently upon other articles to make up for the loss, partly because the other articles subject to taxation are now so few [hear, hear], and partly from other causes. I am not looking at it now from the point of view of the consuming power of the country, but simply from the fiscal point of view. I trust that the committee follows me. [Hear, hear.] Now the amount of duty on alcoholic liquors was in 1876 over £31,000,000; in 1886 it was under £27,000,000, a fall of £4,000,000, due in great part—I trust by far the greatest part—to the increase of temperance. [Hear, hear.] Now in former times, when there were a large number of articles subject to duty, it was generally expected that where there was a falling off in one branch of revenue the loss would be recouped under other heads. But now the articles on which duty is levied are so few that when you lose this great revenue on alcoholic drinks you have nothing to fall back upon but the tea duty, the tobacco duty, and the small duties upon coffee and dried fruits.

The basis of our taxation is extremely narrow, and it is incumbent upon us, therefore, to examine both the strength of those great props on which the revenue rests and also the forces on the side of expenditure which may be brought against those props. [Hear, hear.]

I have given the figures with respect to alcoholic drinks. It is not any diminution of consumption, but it is the diminution of the number of taxed articles which brings about those striking effects to which I have alluded. The total revenue from consumable articles has fallen from £43,000,000 in 1876 to £41,000,000 in 1886, a diminution of £2,000,000. In 1876 liquors brought in £31,000,000 and everything else £12,000,000, while in 1886 liquors have brought in £27,000,000 and everything else £14,000,000, making a total of £41,000,000 as compared with £43,000,000 in 1876. That is, after ten years, a diminution of £2,000,000. But if the population continued

to consume at the same rate as it did ten years ago the revenue at this moment ought to be £48,000,000, whereas it is only £41,000,000. That shows the weakness of our position.

I do not wish in the slightest degree to rest an argument upon the cost of the breakfast table as it is now compared with what it was ten or twenty years ago. Still it is an interesting fact that the fall in the prices of tea and sugar has been greater than would have been the boon of the total repeal of the duties upon those articles in 1866, and that at the present time a cheaper breakfast can be secured with a sixpenny duty on tea than could have been obtained in 1866 had the duties upon tea and sugar been entirely repealed. [Hear, hear.] The fall in the prices of tea and sugar has been so great that whereas in 1866 a pound of tea and a pound of sugar would have cost 2*s.* 6*d.* and in 1876 2*s.* 1½*d.*, in 1886 they would have cost only 1*s.* 7½*d.*, or 3*d.* less than they would have cost in 1866 with all the duties taken off. [Hear, hear.]

I have lingered over these matters in order to prove that from a fiscal point of view the revenue as regards consumable articles is not in what one would call a satisfactory and in an elastic condition. But I do not attribute that fact to the diminished consuming power of the people, but rather to a change in their habits. [Hear, hear.] But the fact remains that we have, as compared with ten years ago, a declining revenue, and one which must continue to decline as far as consumable articles are concerned.

I must now ask the committee to turn from those duties which affect the mass of the population to those which affect the well-to-do classes. Passenger duty has decreased from £700,000 to £300,000. But there have been large exemptions in respect to that duty—the exemption of third-class passengers above all—which account for the falling off in its amount of produce. The revenue from licenses remains nearly stationary, being about three and a half millions, but there is one particular portion of them—namely, licenses on the luxuries of the rich—which during the last ten years has shown a great and continuous decline. On male servants the amount of license duty has decreased between 1877 and 1886 from about £39,000 to £29,000. On armorial bearings there has been a diminution from £20,000 to £17,000, and on carriages a diminution of £4,000. That is precisely what we should expect would occur during a period of that commercial and agricultural depression which has existed during the last few years, and which has affected the well-to-do classes. [Hear, hear.]

I will now turn to a more interesting item of the revenue—I mean the income tax. The produce of the income-tax per penny has increased very slowly during this period, it having fluctuated from £1,850,000 to £2,000,000. But while the total produce per penny has undergone little change, there has been a great change in the produce of different kinds of property which is distributed among different classes of people. The assessment of lands under schedule A was £69,000,000 in 1877 and £63,000,000 in 1886. That was on lands alone. The assessment under Schedule B, which relates to farming profits, was per penny £74,000 in 1876, £51,000 in 1886, and only £47,000 in 1887, being a fall of 36 per cent. in ten years. This is a notable circumstance, and one which should be taken into the consideration of the committee. [Hear, hear.] As regards houses during the same period, there is an increase in the gross assessment from £108,000,000 to £131,000,000. With regard to Schedule D, which is the great stand-by of the revenue, containing as it does the profits of trade and business, in 1869 the assessment was £161,000,000, while in 1876 it was £242,000,000, being a jump of £80,000,000 in seven years. But from 1876 to 1886 it only rose from £242,000,000 to £247,000,000, being an increase of only £5,000,000 in ten years.

I wish the committee to grasp the full significance of those figures [hear, hear], and I hope that they will follow me in the line of argument I have taken with reference to the elasticity of the revenue, as it will enable us to see how far we may count upon that elasticity in the future. [Hear, hear.]

I now approach a point which I think will be of some considerable interest to the committee, namely, the distribution of wealth as shown by the produce of Schedule D. In order to test the matter I will take a particular and an important district in the city where the assessment under Schedule D is between £16,000,000 and £17,000,000. The gross assessment in respect of individual profits from trades and professions in that district declined from £7,050,000 in 1876 to £6,150,000 in 1886, but meanwhile the profits of public companies increased from £7,200,000 in 1876 to £10,700,000 in 1886. That so far is a circumstance very notable from a social and economical point of view. [Hear, hear.] The creation of large companies such as those of Guinness and Allsopp at the moment secures to the owners of those undertakings the accumulations of past years, but in future the profits of those large undertakings will be distributed over a much larger area, and a much greater part

of the population will share in industrial, commercial, and banking undertakings. [Hear, hear.] That is a matter which I hail with considerable satisfaction. [Cheers.] My inference as to the greater distribution of wealth is further borne out by the figures which I will now read.

In the district referred to the profits of persons having an income of less than £1,000 per annum increased from £1,540,000 to £1,663,000 between 1876 and 1886, being an increase of 7 per cent., while those of persons having an income of between £1,000 and £5,000 fell from £1,580,000 to £1,363,000, being a fall of about 14 per cent.; incomes over £5,000 fell from £3,925,000 to £3,120,000, or a fall of 21 per cent. So that there is this remarkable fact—that below £1,000 the incomes had increased 7 per cent.; between £1,000 and £5,000 they had decreased 14 per cent., and on incomes of £5,000 and upwards there was a decrease of 21 per cent. That brings us to the point at which I was driving before—namely, that there is more distribution of wealth, and it is perhaps what I may call the distributing classes whose incomes are below £1,000 who have suffered least from the general depression. The commercial depression has struck at the top; it has struck the great manufacturers; it has also affected the wage-earning classes to a certain extent, though they have been largely indemnified by the fall of prices; it has struck at the agricultural classes and the farmers; but the middleman has not suffered to the same extent. [Hear, hear.] Now I shall soon be finished with this review of the sources of revenue, but still it is a matter of such importance that I ought not to apologize for lingering so long upon it. [Hear, hear.]

I have still to deal with the stamp duties, which have undergone little or no alteration. To recapitulate, the committee will remember the position of the consumable articles, they will remember the position of the luxuries of the rich, and what I have said with regard to the slow growth of the income tax; and now there remains the great item of revenue from stamps. And here one would have expected that the progress of business would show considerable progress in the stamp duties. But that is not the case. More business is clearly done, as the clearing-house returns show, but I am sorry to say that there has been more and more cleverness in evading the stamp duties in many ways [laughter], and though there is an increase in this department I consider the whole region of the stamp duties not to be in a satisfactory position.

Stamps fall under two great heads—the death duties and the duties on deeds, transfers, and conveyances. There has been an increase, and a decided increase in the death duties, but that has been due, as my right honorable friend opposite is aware, in great part to legislation. But with regard to other stamps there is very little change. And there is one curious reason for this that I may mention.

All bills, as honorable members are aware, are taxed with a rather high tax, but the telegraph has introduced a system of making telegraphic transfers, and now when a remittance has got to be made of £100,000 from New York to London, instead of sending it in bills which would pay a handsome contribution to the exchequer, men simply send a telegram, saying pay to so and so on such a day £100,000, and the operation escapes altogether. [Laughter.] The result has been a considerable loss, and the ingenuity of chancellors of the exchequer ought to be directed whenever they can find time, to a revision of the whole theory of the stamp duties in order to see how far that valuable source of revenue may be maintained. [Cheers.] And here, again, I feel obliged to repeat what I have said before, that it has not been an elastic one, and in no direction of all the sources of revenue which I have examined have I seen that hopeful progress which we might have wished for and expected. Now, I hope and believe that there is a change—I won't call it considerable—for the better in the aspect of business generally. Whether it extends to agriculture is a matter upon which many members of this house are much better able to form an opinion than I am [murmurs]; I believe they are not sanguine as to that, but there is an impression that there will be an increase in the commercial prosperity of the country. If I might use an agricultural simile in regard to it, I should say that we may consider that the soil is in a much sounder condition than before, and there is a better spirit in the commercial and industrial world, but I do not know to what extent it may be developed in the present financial year, and it has always been laid down by the right honorable member for Mid Lothian that it always takes some time before an increase in the general prosperity of the country really tells in the way of the increase of the revenue. Now, having completed the story with regard to the general aspect of the revenue and the expenditure in its broadest features without reference to any particular year. I turn to that which may be of more interest to the committee—namely, to the estimates of the coming year.

The committee will bear in mind that in framing these estimates I have had in my mind many of those general considerations which I have thought it right to

submit to the House. Customs, I estimate at £20,200,000, or £45,000 more than the past year; excise, £25,292,000; stamps, £11,658,000; land tax, £1,065,000; house duty, £1,920,000; property and income tax, £15,900,000, the same as the exchequer receipts of last year, giving a total of taxes of £76,035,000, or £80,000 less than last year. The post-office, I estimate at £8,600,000; telegraphs, £1,950,000; Crown lands, £370,000; interest on advances, £1,200,000; miscellaneous, £3,000,000, making a total produce of non-tax revenue of £15,120,000—the grand total revenue thus being £91,155,000, as against £90,772,000 in the last year, or an increase of £383,000.

The committee will observe that there is an actual decrease in the produce of taxes in the coming year, which is, however, remarkably made up for by an increase in the non-tax revenue. Customs we put up £45,000; I allow for an increase on tea and tobacco of £85,000 each, but in foreign spirits a decline of £16,000. I must point to a curious circumstance connected with this, that in making these estimates we have not failed to take into account the fact that the coming year is leap year, and therefore there will be one extra day on which to consume tea, tobacco, spirits, etc. [laughter], and considering the large number of millions over which our revenue extends that is not an unimportant point. [Hear, hear.]

Now, I do not think I need go into further detail. Excise I put up £42,000, but it is chiefly owing to an increase of £130,000 in beer. I take the decrease on British spirits for the coming year at £52,000. We estimate an increase in the consumption of beer owing to one or two circumstances—in the first place, the extraordinary cheap price of hops, a factor which always affects the production of beer; and also to the fact that the recent prosecutions of publicans, which resulted in the discovery that there was a very considerable adulteration of beer, has increased and is increasing the production of beer proper to the exclusion of the water which is mixed with it. [Laughter.] And thus, while the excise officers have been rendering to the drinkers of beer a real service, giving them beer instead of beer watered, they have at the same time done a good stroke of business for the revenue by substituting an article which is taxed for an article which is not taxed—namely, water. [Laughter.]

There is an increase in the consumption of beer which has been noticed during the last three or four months, and also taking into consideration the fact that there is an additional day next year, we consider ourselves justified in reckoning on this increase; but in spirits, again, we should do wrong unless we allowed for a decrease, and we put that, as I have said, at £52,000. Now, the income tax we have placed at the old figure of £15,900,000—the figure which represents the exchequer receipts of the past year; but my right honorable friend the member for Derby will especially be interested to know that the actual receipts of the income tax for 1886-'87 have been £16,000,000 and a few thousands more. Now, it will be asked, why with the prospects of improved business, with better hopes for the future, do you put the income tax as low as £15,900,000? Why do I put the tax so low? Because, under Schedule D, which contributes so great a share of this tax and which is taken on an average of three years, we get a worse three years on which to average the profits than in the past year. The year 1883 was a better year than 1886. In the past year the profits were estimated on 1883-'84-'85. Now the profit is estimated on 1884-'85-'86; and the profits of those years being less than the profits of the former three years, owing to the loss of the year 1883, we are not justified in expecting a material or any increase in the income tax, especially if we look to the fact that Schedules D and C must make up for what may possibly be a progressive diminution under Schedule A as regards land, and under Schedule B for farming profits. Stamps I put down by £170,000, because that process of collecting arrears to which I have called attention has now almost come to its natural end, and also the continual effect of the exemption of lineals from the legacy duty will come into greater force, and also the fall in the value of land will continue to affect succession duty.

I have shown that the revenue from taxes will be £80,000 less than the year before, but the revenue which is thus reduced in respect to taxes is raised by the non-tax revenue. In the post-office, the telegraphs, and miscellaneous receipts there is an increase of £382,000. I have now shown what I estimate my revenue for the coming year to be. If honorable members will take the expenditures for the coming year, we shall arrive at some interesting figures. I estimate the permanent charge on the debt at £28,037,000; the interest on the sinking fund at £641,000, interest on Suez Canal and exchequer bonds £200,000, and other charges on the consolidated fund at £1,714,000. Those charges in the exchequer issues of the previous year were £29,701,914, which shows an increase of charge in this year of £890,000; the total for 1887-'88 being £30,591,917, and the total of last year £29,701,914. This is mainly due to the revival by law of the two sinking funds which were suspended by the right honorable member for Derby. One of these funds

amounted to upwards of £600,000, and the other to upwards of £200,000, which together made about £890,000. They increase the charge on the total consolidated fund by that sum, and I have to allow for that in my expenditure.

The army is £18,393,900 as compared with £18,429,272; for the navy the estimate is £12,476,800 as against £13,265,401, a decrease, I am happy to say, of £788,000. [Cheers.] The civil services are estimated at £17,931,508 against £17,826,454; customs and inland revenue, £2,715,727 as against £2,676,918; post-office, £5,420,770 as against £5,436,893; telegraph service, £1,950,248 as against £1,935,000; and packet service, £699,341 as against £724,900—the total being £59,588,294 as against £60,294,838, a decrease of £707,000 on the total supply services. The total expenditure last year was £89,996,752, and the estimated expenditure for this year is £90,180,000, being an increase of £183,000.

I will now turn back to the revenue. The total revenue I gave at £91,155,000 and the total expenditure is £90,180,000, giving me a surplus of £975,000. [Cheers.] It will be asked, having this surplus, what I intend to do with it. The first thing I intend to do with it, if I can persuade the committee to do so, is to increase it by a change in the stamp duties which I will explain to them, and which will involve an additional revenue of £100,000.

The transfer duty on property generally is 10*s.* per 100, and the transfer duty on mortgages and debts is about 6*d.* per £100. The ordinary stock and shares and preference shares of railways have been properly treated as property, and they have the privilege of paying that higher transfer tax of 10*s.* It would appear as if the legislature had contemplated that borrowing ought to be made easier than buying, because they had placed such a small duty on the borrowing process and a heavy duty on this property. If that is so, nothing which is real and substantial property ought to escape, and if there are any marketable securities which, under the guise of loans, ought to be treated as property, I maintain they ought to be brought within the net and pay the 10*s.* per £100 which is paid by other kinds of stock. Now, debenture stock is an item which has hitherto escaped, as I understand, on this principle—that it represented funded property, and debentures were treated as instruments of credit and not as capital, and perhaps fairly so to a certain extent. Debentures expire after a short period and represent the borrowing operation of a company. But when they are funded they become property, and debenture stock is as good or better than ordinary or preference stock or any other form of marketable security; and therefore I do not see that it should escape. It had one claim for exemption in times past, which was that instead of being taxed on transfer, like ordinary stock, debenture stock paid a small initial duty of 2*s.* 6*d.* at its birth, and that initial duty emancipated these debentures from the heavy transfer duties afterwards. But debentures by a later act were charged 2*s.* 6*d.* per cent. and that is the tax which I now propose to raise to 10*s.* and to put the debenture stock on the same footing as ordinary and preference stock. [Hear, hear.]

A further change in the law which I intend to ask the committee to accept is to carry further a principle which has been extremely valuable in most forms of taxation, viz, to tax at the fountain-head rather than lower down, and to see whether we can collect in one sum rather than to collect in a number of small sums, and I wish to propose that a tax of 1*s.* per £100 should be placed on companies, which tax should clear those who elect to submit to it and which shall emancipate all their capital stock from paying any transfer duty at all. The companies would be able, if they chose, to recoup themselves by charging those who come to them with transfers with the identical fee now charged, so to speak, by the Government. They would secure themselves against loss in that way, but whether they do so or not I can not tell until the experiment has been tried. But we should not propose to make this compulsory on all companies, because the proprietors of some of the old companies may claim that the transfers are so few that they would suffer grievous loss where they never sold stock by having to contribute towards a charge which would fall on the whole shareholders. But in those companies where transfers are frequently made it is believed that it would be extremely popular that these transfers should be entirely exempt from the stamp duty.

The proposal that I shall have to make is this, that as regards existing companies a charge of 1*s.* per £100 on their total capital should be imposed on them. It is extremely small; it is only one-twentieth per cent. The general effect is that if transfers were conducted on the same scale as at present there would neither be much loss nor much gain on either side; but I should not be doing my duty as chancellor of the exchequer if I did not take care that if there were a gain one way or the other it should be on the side of the revenue. [Hear, hear, and a laugh.] The duty of 1*s.* per £100 on the property of the companies will rather exceed the total sum which is now derived from transfers. But I have taken valuable opinions on the subject, and though I may be mistaken I believe that a vast number of companies

will themselves welcome the change, and that shareholders will find it to their interest in dealing with stock to arrange for that kind of composition. I expect from this proposal an increase of a little over £100,000, which will, however, be diminished to £100,000 by another small change in the stamp duties, which will inflict a small loss on the revenue.

An HONORABLE MEMBER: Is it optional?

The CHANCELLOR OF THE EXCHEQUER: We should much more prefer to make it compulsory, but there would possibly be much opposition on the part of some of the companies, and therefore we propose, in the first place, to make it optional; but we think the convenience will be found to be so great that all the companies will soon see that it is to their advantage to adopt this arrangement.

An HONORABLE MEMBER: Government stock.

The CHANCELLOR OF THE EXCHEQUER: For Government stock there is already a composition. Colonial and Government stocks all stand at present under a separate arrangement, and are not treated as other property. I should be glad to make a further statement on this important matter at a later stage. I have now to ask the committee to follow me into a subject which is considerably more intricate than any of those on which I have been engaged. I wish them to leave for a moment this balance of £974,000 increased to £1,074,000 by the £100,000 of which I have spoken, and to accompany me for a few minutes into a different branch of the subject; but I hope we may come back to our balance, and with something satisfactory in our hands. I wish now to deal with a subject which ought to engage the most earnest attention of the committee, and that is the subject of local loans and the use of the public credit which from day to day is now extending in larger and larger measure, not, I think, without some risks to the revenue, and not without possibly impairing ultimately the credit of the state. But what I am anxious above all to engage the public interest in is that the public should know precisely how it stands — that it should know what liabilities it has incurred and how it has raised money to meet them, what is the revenue derived from the local authorities to whom the state has lent money, and what is the charge resting on the exchequer for the money which has thus been raised.

There have been in the present century over £100,000,000 found by the state for local loans in the United Kingdom. I shall presently state to the committee how much of that sum has been paid off and how much has been lost, because there have been material losses on sums which have been lent, and how much remains outstanding. But first let me point out how the money has been raised for this purpose. A portion of it has been paid out of exchequer balances, and that has vanished in our general finance. There is no notice taken in any of our records of expenditure with reference to these advances after they have been made, which have been made direct from the exchequer in past times. A portion of the money has been raised by exchequer bonds and exchequer bills. There is the further complication that, again, some of these bills have been funded, and stock has been created representing the funding of those exchequer bills. Part has been raised by treasury bills and part by the public loan commissioners borrowing direct from the national debt commissioners, an operation which does not enter into the national accounts at all, only the surplus of interest or the deficit being paid into the exchequer.

The result of this most confused and unsatisfactory state of things is that nobody can see at a glance how much money we really have contributed towards local loans, or what the charge on the revenue is from those local loans. Honorable members who are familiar with the accounts know that there is an item of £960,000 derived from interest on local loans. But that does not represent the whole interest on local loans, because a further sum is paid direct from the public loan commissioners to the national debt commissioners; and it is only by very great trouble that you can bring the whole of the figures together and see precisely how the case stands. Again, money has been lent out by different bodies and in different ways. Some loans have been made by the public loan commissioners in England, and others by the public loan commissioners in Ireland, and by the land commissioners in Ireland. Now what I venture to think is essential, especially in view of the growing character of these demands for local loans, is that a separate account altogether should be made with regard to this kind of expenditure and revenue, and I propose to take it entirely out of the budget and to establish a separate account, with a separate banking account, separate receipts and expenditure.

The House will see that no one can estimate what our national debt is if we do not know how much of it ought to be written off as represented by remunerative loans on the other side. For instance, if we were to add to local loans £10,000,000, we might raise them by adding £10,000,000 to consols, which would be represented by £10,000,000 on the other side. But that £10,000,000 would then enter into the body of our national debt. We should say we had increased the national debt while

we had not really increased it. We had been incurring a liability, but we had an asset on the other side. Therefore, by a somewhat complicated process, I want to clear the national budget entirely from local loans, parting with the interest which is now paid to the national exchequer, and at the same time relieving ourselves of so much of the debt as is represented by existing and solvent local loans. Let me point out how under the present system local loans are dealt with. It has been an economical system, but it appears to me to be essentially faulty in principle.

Local loans run for twenty-five, thirty, and forty years. They are long loans, but we have been financing these local loans by the issue of treasury bills repayable every three or six months. There has been a large issue of treasury bills. On the first aspect of the matter these loans no doubt have been conducted on very economic principles. We have been borrowing to supply the funds for them at 2½ per cent.; but who can guaranty that in the course of a year or two years hence, when we have to renew these treasury bills, we may not have to pay a much higher rate of interest? We might have to pay 4 per cent. or even more in troublous times, and I say it is bad finance to borrow on treasury bills for three months or six months for what I may call a permanent purpose. [Hear, hear.] Therefore I propose to discontinue the system of borrowing on treasury bills for local loan purposes. [Hear, hear.] The plan I have to propose I will now describe.

In the first place, I will state how the money has been raised for these local loans. £8,600,000 was raised by exchequer bonds now funded and represented by consols at 2½ per cent. Exchequer and treasury bills are outstanding to the extent of £6,400,000, making together £15,000,000. Then the national debt commissioners have £9,500,000 employed in the hands of the public works loan commissioners, to whom they have lent direct. That makes a total of £24,500,000. The remainder of £12,700,000 was advanced out of exchequer balances, and brings up the total to £37,200,000. That is the amount of local loans which is now outstanding after deducting the sums that have been lost and remitted. Now what I propose to do is to create £37,000,000 of local loan stock, which will represent the precise sum now outstanding and owing by the localities. On that £37,000,000 there will be payable 3 per cent. That will constitute a charge on the new local loans budget. On the other hand, there will be transferred to it £960,000 which is paid by local authorities, besides the sum now paid by them direct to the exchequer and to the national debt commissioners; so that this new account will receive the whole of the revenue derived from the interest on local loans and will be charged with the interest of £37,000,000. I was coming to that year, but it may interest the committee to knowthat there were advances to the 31st of March, 1887, amounting to £106,000,000. Of that amount £57,200,000 were repaid, leaving £48,800,000 unpaid. We had remitted £11,600,000, the total amount outstanding being £37,200,000.

An HONORABLE MEMBER.—Absolute loss?

The CHANCELLOR of the EXCHEQUER.—Yes, the £11,200,000 was absolutely lost. Of that sum £7,000,000 is due to the Irish famine [opposition cheers], and with regard to that I say nothing, because that loan was made by the nation with its eyes open and under special circumstances; but the remainder of the £11,000,000 has been lost, and I call the attention of the committee to the fact because it is often argued that there is a profit and a margin between the 3 per cent. at which the state can borrow and the 3¼ or 3½ per cent. paid to the state by the local authorities. But you must establish a margin by which you may be able to repay any losses which may occur. It may be said that there will be no losses; but in reply to that I point to the past, and I say that the losses which remain are considerable and should be provided for.

Mr. MUNDELLA. English losses?

The CHANCELLOR OF THE EXCHEQUER. It includes all losses—English, Irish, and other losses. [Hear, hear.] I hope my right honorable friend, who has got designs on the exchequer of which I am extremely apprehensive, does not wish by that question to imply that these losses being Irish losses there is no fear of losses on advances for English purposes. I do not know whether that is in his mind, but I say, as prudent men, when we do arrange with local authorities let us do so with the idea that there is always a possibility of losses whatever caution we exercise, and that all who are thoroughly interested in finance will do their best in order to resist any lending upon questionable security. I have said that we have got to create £37,000,000 of stock in order to simplify the transaction. I cancel £37,000,000 of other portions of the present public debt. I cancel £9,500,000 of the bonds of the public works loan commissioners. I cancel the funded and unfunded debt now ear-marked as local loans debt and which stands outside of the permanent charge, viz. £15,000,000, and besides that I cancel and reduce the national debt by £12,700,000, which represents money directly lent from the exchequer balances to the borrowing authorities. The national debt would have been £12,700,000 less

if we had applied the balances as they were available for the reduction of the debt instead of lending them out, and I am restoring the position as it would have been if the money had not been lent by canceling so much consols, while I create local government stock on the other hand. I trust the committee will take from me this—that we establish an entirely new local budget, and on that budget every one will be able to see precisely how the case stands, and there will be a margin on that budget because the cost of paying the interest of £37,000,000 will be less than the revenue paid in the shape of interest on the local loans. But I wish to charge this local loan budget with an annuity which, I believe, will amount to about £150,000, to recover if possible the £4,000,000 which we have been obliged to write off or to meet new losses that may occur.

I do not think it would be right to start this scheme with a loss of £4,000,000 which has been incurred, and I am anxious that the committee should know and remember that there has been this loss, marked in this way by a special item which will occur in the local loans budget every year. As fresh local loans are made they will be made either from repayments on the existing loans falling in every year or by the creation of fresh local loan stock. The financial effect so far as the budget is concerned is that we lose the difference between the amount which is now charged and the interest which is paid from local loans, the one being a little over £600,000 and the other £960,000. The difference between the two as against the budget is over £330,000. I have now to take the committee into the very interesting subject of the charge upon the national debt.

The committee is aware of the circumstances under which Sir S. Northcote fixed the permanent charge for that debt at £28,000,000, and which was increased to £28,037,000 by subsequent operations. The committee is aware that a portion of that has been suspended at several times under the stress of the operations of war. During the last year the member for Derby felt compelled to suspend the sinking fund of £800,000. I wish to examine this matter in an exhaustive spirit, but I fear that I have nearly exhausted my time. I have been passing in my mind various circumstances which bear on the point whether that sum of £28,000,000 has been rightly fixed. The committee will have noticed, over a period not of one year or five years, but in a course of years, the increasing inelasticity of the revenue. The committee will be aware that the growth of the revenue which was expected has been absent, and that the revenue does not increase in proportion to the population. The committee will remember the circumstances under which Sir S. Northcote fixed £28,000,000. The income tax was then 2*d.* in the pound. It stands now at 8*d.* [Hear.] This is a notable point.

Again, in the year 1874-'75 the total charge on taxes was £62,633,000; the net debt charge was £26,495,000; so that the total charge on taxes for the whole of the other services, exclusive of the debt charges, was £36,138,000. Last year the total charge on taxes was £75,340,000, the net debt charge being £26,596,000, even after the sinking fund had been suspended, otherwise it would have been greater. The total left for purposes other than debt charges was £48,744,000, as compared with £36,138,000. We are paying, exclusive of debt charge, £12,600,000 more in taxes than at the time when Sir S. Northcote proposed his measure, and that not with any addition of new taxes, but on the same basis practically as our financial system rested then. Now, Sir S. Northcote anticipated that there would be an ordinary growth of revenue, and these are his words: "I have no doubt under ordinary circumstances, with the ordinary growth of the revenue, we shall very easily be able, without any injustice to the country, to bring up the charge for debt to £28,000,000." [Hear, hear.] Yes, but "easily." To be able to do so we have been obliged to increase the income tax to 8*d.* [Ministerial cheers.] "But if this should materially alter, it would be only right," Sir S. Northcote said, "to take steps to take off that which we now put on."

What I want the committee to examine is whether the circumstances have materially altered from that time when Sir S. Northcote proposed his budget. When he proposed this increase to £28,000,000 we were at the end of a period of great prosperity. There was, indeed, then advances by leaps and bounds. Now, let the committee pass back to the figures I supplied at the earlier period of my statement, when I showed how there had been in the quinquennial period preceding the time at which the £28,000,000 was fixed an increase in the produce of taxes other than the income tax, amounting to 24 per cent., while in the next quinquennial period there was an actual decrease of 3 per cent. It is apparent that the situation now is totally different. What I say is that in the interest of a steady and sufficient repayment of the national debt it would be unwise if we were to strain our bow too tight, and in endeavoring to defend the £28,000,000 were to make the weight of our taxation difficult to bear.

What has been our course during the last few years? It has not been satisfactory. Sinking funds have had to be suspended, and they will be suspended again so surely

as anything comes which strains in the slightest degree our resources. I admit the plausibility of the argument that it is better you should suspend the sinking fund when there is any stress rather than you should impose new taxation. But I am not convinced of its truth. I think it is a most wholesome restraint upon any expeditions or costly undertakings that it should be necessary to impose taxation [cheers], and that you should not be able to cut the knot simply by suspending the sinking fund. I admit that the sinking fund is an admirable institution, and I should be sorry to tamper with it to any great extent. But, looking to the present situation and to the fact that practically the whole burden of paying off debt has to be borne by the payers of income tax, I am disposed to think that in the interest of sound finance and with the view of keeping up steady repayments it is advisable to reconsider our position.

I have shown the committee that there is an increasing temptation to expenditure, that there is danger in relying on increasing revenue. I do not know whether new sources of revenue are opening out to the minds of my right honorable friends; I do not know whether they see how they would meet the difficulties I am pointing out. For my own part I see fresh dangers threatening the payers of income tax. It has been continually argued in this House that the contribution which is made by personal property to the rates is inadequate. I have often argued to the contrary, but the majority in this House have decided over and over again that in some form personal property will have to contribute to taxation. Again, it is a serious thing if we lose the elasticity in the revenue, and if we cling absolutely to a charge which was fixed in totally different circumstances, that we are deprived of all means of improving the burden of taxation. There are no means available; the screw is turned too tightly. I do not propose any large or heroic measure; but I do intend to submit a proposal to the committee. I am sorry I shall offend against the paternal affections of my right honorable friend the member for Edinburgh, because the way I propose to reduce the charge from £28,000,000 is by dealing with the rolling annuities he established. He established rolling annuities which do credit to the ingenuity of the right honorable gentleman. There were three annuities, each amounting to £1,200,000, one for five, one for ten, and one for fifteen years. I propose to simplify these three rolling annuities and to roll them up into one single annuity [laughter] of the sum of £1,930,000. That is a relief of £1,670,000; and the proposed fixed charge in future would be £26,000,000. Outside the £26,000,000 to which I have alluded there will be an annuity which will be charged on the local budget. Besides that, there will be the old sinking fund—a balance which arises from year to year.

I think the committee will see that the amount of debt which will still be annually redeemed will be very large indeed. The right honorable member for Mid-Lothian expected in 1881 that £60,000,000 would be redeemed by the year 1904, at which time these new annuities will terminate, but under my proposals we shall really have redeemed £70,000,000 of stock. I have made a calculation that in the future the amount devoted to the repayment of debt will be about £5,000,000 annually. If that is steadily persisted in, it will redeem £600,000,000 at par in about fifty-two years, and it will redeem £700,000,000 of the national debt in about fifty-six years. [Hear, hear.] I submit these considerations to the committee. I rest my proposal upon this, that the situation is totally different from what it was when the present arrangements were made. Even Sir Stafford Northcote himself contemplated that if circumstances altered it would be necessary to alter his system. I lay great stress upon this fact, that unless we put the matter into an endurable form you will risk far larger inroads upon the sinking fund than I now propose.

Let me remind the committee of the great difficulty there was when taxation had to be imposed to meet special charges not long ago. An additional 2*d.* was put upon the payers of income tax, and proposals were made to put a tax upon some other consumable articles. These proposals were rejected by the House, and the House had to fall back upon the simple process of increasing the income tax by 2*d.* and of suspending the sinking fund. This sinking fund is not in a strong position; it is proved to be in an unsafe position while it continues as heavy as it is now. I now go back to the surplus of which I have spoken, which amounted to £1,074,000, to which must be added the relief given by this £1,670,000. I therefore have a sum to deal with of £2,745,000.

The committee will have anticipated from my arguments that a reduction in the income tax would naturally follow. [Hear.] I propose to reduce the income tax by 1*d.* in the pound [cheers], which involves a loss of £1,560,000 in this year. Before I leave the income tax there is another change which I propose which will not lead to much loss in the revenue, and which loss will be included in the loss I have stated. It is a relief which will be an agreeable act of justice to a rather suffering portion of the community.

I wish, under Schedule B, to renew a proposal which was made by the right honorable member for Edinburgh (Mr. Childers), which was to give farmers the option of being taxed on their actual profits rather than on the arbitrary line hitherto adopted. Farmers and the occupiers of land generally are taxed at present on one-half their rent in England and one-third of their rent in Ireland and Scotland. The question is, have farmers made half their rent during recent years? I expect that farmers in many places have been paying on a larger amount than they have actually earned. [Hear, hear.] But out of a total of upwards of 140,000 assessments there have been only 10,000 cases of appeal against that which appears on the face of it to be too high a charge.

In many parts of England the profits have been below half the rent. When the proposal was made before it was suggested that the farmers did not keep accounts, and therefore they would not be able to make statements of their profits, and they would, therefore, object to be charged under Schedule D. To get over that difficulty I would propose for the present to maintain Schedule B, so that they may be still charged under that Schedule if they do not object, but if they wish they can be charged under Schedule D. The exercise of this option will obviate the necessity of a local appeal, which involves technicalities to which objection has been taken, and will give the farmer an opportunity of appealing to the special commissioners in the same manner as other persons who are assessable under Schedule D. That question of the farmers reminds me of the rate-payers, and of the promise which has often been held out and the plans which have continually been entertained with regard to much larger schemes for dealing with local finances. The committee is aware that the president of the local government board has a large measure in preparation which deals both with the subject of local authorities and with local finances. This government has recognized, and previous governments have recognized that it is their duty to go forward in this matter and to recast local finance to a very considerable extent. But the difficulty has always been this—and it is a difficulty which remains at this moment—that you cannot begin your financial reforms till you have constituted your new authorities. Nor will you be able to have half the interest taken in the bill and half the steam power necessary to carry it if all the financial reforms were made in the first instance. [Hear, hear.] The government stand by that doctrine, as their predecessorshave stood by it, and they invoke the assistance of the house in making such progress with business that at the earliest opporunity my right honorable friend may have an opportunity of producing and carrying forward his measure. Gentlemen may ask whether something cannot be done in the mean time—whether the principle of the transfer of the taxes, which has been the favorite scheme of local government reformers, could not be extended; for instance, whether the carriage tax cannot be handed over at once. Well, I am prepared to hand over an amount equivalent to the carriage tax to the local authorities, including the contribution which is now made in relief of main roads and turnpikes. If we hand over the carriage tax, you would not get the relief in the form in which the contributions now are granted. When taxes are handed over it is necessary to make very careful calculations to see that those who are intended to be relieved are relieved by the transfer. Looking to the long-enduring character of the patience of those who have been promised relief, and who, through the accident of legislation, have had that relief delayed, and may still have it delayed for another year, I am prepared, instead of giving, as now, a half of the produce of the carriage tax in aid of main roads and turnpikes, to hand over a sum equivalent to the whole of the carriage tax, which means that the amount now paid will be doubled.

It is to be distinctly understood that that is not a permanent arrangement, and that it is only in anticipation of the transfer of the carriage tax in future. I do trust that the carriage tax may be one of the taxes that we may be able to transfer in the future, and it is with the view of handing over that tax in its entirety at some early day to the local authorities that I have been unable to revise the whole of that tax in the manner which was pressed upon me by many influential deputations. To use a forcible expression, these deputations may "have it out" with the local authorities. [Laughter.] Honorable members from Ireland will possibly be wondering whether, if England and Scotland get a boon which amounts to £245,000 for England and £35,000 for Scotland, Ireland would be forgotten entirely. Ireland contributes nothing towards the carriage tax, and therefore so far as the transfer of the tax to local authorities for main roads and turnpikes is concerned, Ireland would have no claim. At the same time—and we have debates on this subject—I do not consider that Ireland is paying too little to the imperial revenue as it stands at the present time. I demur to the statement that Ireland is paying too little as I do the statement that she is paying too much. In making these concessions to England and Scotland, I do not wish to change the present balance as between Ireland and England; therefore I reserve £50,000 for Ireland. I am not

disposed to think that this should be given in aid of the county cess as the relief in England is given to the county rate, because the amount is so small that it would not be an appreciable benefit to the tax-payers. I consider that it would be a better system to give it in aid of arterial drainage, to which so much importance is attached [hear, hear], and which has been inquired into by a royal commission, whose report is shortly expected.

Mr. A. O'CONNOR.—How much a year?

The CHANCELLOR OF THE EXCHEQUER.—It will be £50,000 a year, on the same terms as the temporary arrangement with regard to England and Scotland. I shall be able at a later time, when the report of the commission has been presented, to come to a clearer conclusion as to the best mode of applying this £50,000. I have omitted to say that the grant of £245,000 is given to the county authority and not to the highway authority. The present system is that the county pays a half, the highway authority a quarter, and the state a quarter. We should pay a quarter to the county authority besides continuing to pay the quarter to the highway authority. That will apply also to Scotland.

Mr. CHILDERS.—The whole is to be paid to the county authority.

The CHANCELLOR OF THE EXCHEQUER.—Yes. I now pass on to another point. I spoke of the desirability of making occasional changes in duties, not simply for the purpose of remitting duties, but for the purpose of improving our financial system. We ought to have margin enough to rectify an error when it is made. There is one error which all parties admit to have been made in the fiscal legislation of late years, viz, the raising of the tobacco duties by 4*d*. The tobacco duties were raised from 3*s*. 2*d*. to 3*s*. 6*d*., in 1878, and the fiscal result of that has been most unsatisfactory. The first year under the higher duty was expected to yield an increased revenue of £750,000, but it only yielded £500,000 additional, and in subsequent years the result has been still more unfavorable. The increase in the consumption of tobacco, which was 11 per cent. during the five years between 1872 and 1876, fell to 5 per cent. in the period between 1877 and 1881. We checked the consumption of tobacco; and what was the effect upon the quality of the tobacco and upon the smokers? It will be seen that the consumption has not increased in the ratio of the population. The increase in the consumption of tobacco before the duty was raised was twice as fast as the increase of population, but since that time the consumption has not increased as fast as the population. The consumption per head is now less than it was. But there is this most curious fact. It is not quite so certain that people have smoked less pipes or fewer cigars than before. The same thing has occurred with tobacco as with beer. There has been an admixture of water to increase the weight. The workman pays 3*d*. per ounce for his tobacco. When the duty was increased it was supposed that he would pay 3½*d*., and in that way the dealers and manufacturers would be able to recoup themselves. But that is not what has happened. He does not pay more than 3*d*. per ounce; therefore tobacco had to be produced at 3*d*. How is this done? It is done by increasing the amount of water. The purchaser buys a nominal ounce as before, but he really buys less tobacco and more water, and in that way the revenue loses and the smoker losses, because he does not get the amount of tobacco to which he is entitled.

The price of 3*d*. is too small to enable the manufacturer to produce the tobacco at a duty of 3*s*. 6*d*., and I propose to reduce the duty from 3*s*. 6*d*. to 3*s*. 2*d*. [Hear, hear.] That I trust will be a considerable boon to the working classes, and although it will not affect their pockets, they will get a better article; for we propose to prohibit by law the watering process by which at present the dealer recoups himself for the extra duty.

The natural moisture of tobacco is 15 to 17 per cent., and it is increased to 30 per cent. in the process of manufacture. I was not aware that 30 per cent. of water was necessary for that purpose. [A laugh.] But now tobacco is often sold containing 40 or 45 per cent. of water. In future we intend to make it illegal to sell tobacco containing more than 35 per cent. of water. In the same way as in the case of beer we shall hope for an increased yield of duty, because more tobacco will be smoked. What we propose in this matter involves an immediate loss to the revenue of £600,000, but if it restores the old prosperity of the tobacco trade it will be a gain in the long run.

I will come now to the last point, in which a small charge is made upon a certain limited class of marine insurance. There are policies where the premium amounts to less than ¼ per cent., or 2*s*. 6*d*. in the £100. The present duty of 3*d*. upon that constitutes a very large proportion, and where the premium is, for instance, only 9*d*., which is often the case with regard to articles transmitted from France, the duty amounts to 33 per cent. The effect of this heavy charge is to drive the greater part of the insurance business to Paris and other foreign cities. We propose to put a penny only on all policies where the premium amounts to 2*s*. 6*d*. or less per cent. That will involve a loss to the revenue of about £20,000.

I will now, with the permission of the committee, to whom I beg to return my most hearty thanks [loud cheers] for the extreme kindness with which they have listened to my statement, summarize the proposals I have made to you.

I have a surplus of £975,000. The debt charge is reduced by £1,704,000. There is a gain of £100,000 by stamp duties. That gives a total of £2,779,000. I propose to take £600,000 off the tobacco duties; a penny from the income tax, equal to £1,560,000; then there are grants of £280,000 in aid of local taxation in England and Wales, and £50,000 for arterial drainage in Ireland. That makes a total of £2,490,000, which, taken from £2,779,000, leaves a balance of £289,000, or, in round numbers, £300,000. [Hear, hear.] These are the proposals which I submit to the committee. I have felt painfully, having given my best attention to these matters, that it has not been possible for me in the time at my disposal to go as exhaustively into the question of the taxation of the country as a chancellor of the exchequer is bound to do. I acknowledge, in submitting these partial proposals, that I leave untouched many of those matters which a chancellor of the exchequer ought to touch. I leave untouched the death duties, which require attention in the promptest manner. [Hear, hear.] The stamp duties require attention. There is the question of the currency and the coinage [hear, hear], and the whole question of local taxation, which has to be examined, and which has not been probed to the bottom. All these great subjects I have not been able to deal with. If I were to try to deal with them it would be impossible to find time for their discussion. It is the duty of every chancellor of the exchequer to review these great subjects, which have drifted too long, and to consider likewise the relation which is borne by the taxation of the working classes to that of other classes, whether, even when we take into consideration the fall in prices, it may be too high. What I wish to impress on the committee is that they are not to conclude from the fact that these are the only proposals I can now submit that there are not other much larger tasks which remain either for ourselves or for those who succeed us. [Loud cheers.]

MEXICO.

REPORT OF MINISTER MANNING.

I have received from the ministers of foreign affairs and of finance the inclosed reply to my note requesting such information as they could give me concerning the mothods employed in framing and submitting the annual estimates of governmental expenditure.

THOMAS C. MANNING.

LEGATION OF THE UNITED STATES,
Mexico, May 9, 1887.

Mr. Mariscal to Mr. Manning.

[Translation.]

DEPARTMENT OF FOREIGN AFFAIRS,
Mexico, May 8, 1887.

SIR: The treasury department, under date of April 30 last, advises me as follows:

"This department is cognizant, through the esteemed official note from the department under your worthy charge, dated the 23d instant, of the note from the United States minister sent to your department on the 20th instant, requesting that he be furnished some data which he requires to comply with instructions received from his Government, directing him to report upon the methods employed in the Republic in framing and submitting the estimates of governmental expenditure and the estimates of receipts, and the manner of meeting those estimates when they assume the character of a law; describing the procedure followed from the inception to the completion of the budget, and detailing the general system of taxation, loans, or temporary credits which is supposed to be usual in the financial administration of Mexico; devoting special attention to the specification of administrative features in the treatment of the question of taxation.

"The United States minister concludes by requesting the aid of the departments of state, particularly that of the treasury, in order to comply with the instruction

he received; and you were pleased to refer to me the note in question, to the end that I should furnish the information and transmit the same in reply to the American representative.

"Epitomizing the requests of Mr. Manning, the leading points to explain are the following:

"First. The methods employed in framing and submitting the estimates of expenditures and the proposed receipts.

"Second. The manner of meeting the estimates where they assume the character of a law.

"Third. The procedure followed in the case of taxation loans or temporary credits.

"Fourth. Details of administrative features in the treatment of the question of taxation.

"Touching the first point, it is advisable to commence by referring to the constitution. The seventh clause of the seventy-second article fixed as one of the faculties of Congress the appropriations for expenditures of the federation, which the Executive should present to Congress, and the impositions of the necessary taxes to cover the same. Thence arises the obligation to frame the estimates. Owing to precedent rules, a practice now obtains which is most expedient and in closest conformity to the principles of order, and whereby each department estimates the appropriations for its particular expenditures, including therein all the salaries and expenses, decreed or to be newly proposed, which are to be met in the ensuing fiscal year. Those estimates, in numerical sequence, are referred to the treasury department, which frames a bill of appropriations, and in compliance with the express provisions of the sixty-ninth article of the constitution submits the same to the House of Representatives upon the penultimate day of its first period of sessions. On that same day the house appoints a special commission of five representatives, to which the bill of appropriations is referred for consideration. The commission is required to report thereon at the second session of the second period. The bill as reported upon is discussed according to the rules of debate, and is definitely acted upon at the close of May, in order that it may become operative on the 1st of July following. The estimates of receipts are based upon taxes and imposts, decreed by pre-existent laws, and they rarely suffer modifications, and new estimates are seldom formulated. Generally imposts in the Republic have a permanent character, whether direct or indirect.

"Touching the second point, it should be said that the authorized expenditures of each branch of the administration are met with the proceeds of the revenue. Each department specifies the payments to be made and the fund to which they are chargeable, while the treasury department is the one which issues the warrant authorizing the payment. It is not allowable to deduct from one fund to meet the requirements of another, and whenever any particular allowance is exhausted the Executive so informs Congress, in order to secure the increase which may be considered necessary.

"The method of resorting to taxation loans or temporary credits, referred to in the third point, is not an established system, and it can scarcely be considered as an extraordinary expedient appealed to even in exceptional cases.

"When this has occurred it has been in the case of an advance collection of customs duties in ports from merchants where cargoes are about to arrive, or, in the event of war, loans have been raised whose payment has been guarantied by forthcoming taxes. It should be repeated that this procedure does not imply an established system. At present the Government has an open credit in the national bank, of which it avails itself when occasion offers; but that credit is in the nature of an account current, which should be balanced annually.

"The last point refers to details of administrative features in the question of taxation. The question is too broad to admit of precise reply. It has been said that the taxes of the country, direct as well as indirect, are of a permanent character. Well, those taxes are collected through offices established in the capital of the Republic and in the territories dependent upon the federation, at the ports of both oceans, and in the capitals and towns of the states. The revenue is derived from taxes upon importation and exportation, domestic imposts, and various other sources, whose details can be found in the budget or the revenue laws published annually. The fiscal employés primarily charged with the collection of the taxes, and who therefore arrange the same, are clothed with authority to compel payment. Their procedure involves the protection of the interests of the public treasury, subject to the action of the courts in case litigation should ensue. Under the provisions of the second clause of the eighty-fifth article of the constitution, employés in the country can be freely removed at the will of the Executive. The law of May 31, 1881, established the rules to govern the annual account presented to Congress, and the manner in which the federal treasury should carry the general account of the nation, including therein the partial accounts from all the offices of the treasury, duly au-

dited by that department itself, whose final report for settlement should devolve upon the auditing committee on finance and public credit in the House of Representatives.

"With the foregoing, this department believes that the wishes of the American minister will be met; and while having the honor to communicate it to you, in reply to your note, it gratifies me to renew to you the protests of my esteem and consideration."

And I transmit the above to your excellency in reply to your note of the 20th ultimo, reiterating to you, in this connection, my distinguished consideration.

IGNO. MARISCAL.

GUATEMALA.

REPORT OF MINISTER HALL.

With reference to the Department's circular of the 9th of April last, instructing diplomatic officers of the United States to report on the methods employed in the country where they reside in framing and submitting the annual estimates of governmental expenditure; in other words, to describe the annual budget, I have the honor to transmit herewith a copy and translation of a communication from the minister for foreign affairs, in which he transcribes another, with an inclosure from the minister of finance, giving, he states, all the information his department affords upon the subjects embraced in the circular.

I shall forward to the Department separately the report of the minister of finance for the year 1886, and a copy of the "fiscal code of Guatemala" (*codigo fiscal*), which contains, among other items of interest, the tariff upon imports, the several taxes, Government monopolies, the laws relating to post-offices and telegraphs, public lands, coinage, and mines.

The methods employed in the other Central American states and their general system of taxation, revenues, and expenditures are very similar to those of Guatemala.

HENRY C. HALL.

LEGATION OF THE UNITED STATES,
Central America, Guatemala, December 15, 1887.

[Inclosures in Mr. Hall's report.—Translation.]

DEPARTMENT OF FOREIGN AFFAIRS,
Guatemala, June 23, 1887.

Hon. HENRY C. HALL:

SIR: The minister of finance, to whom I transcribed your courteous note of the 23d of May last, says to me, in reply, what I have the honor to transcribe in continuation:

"In the courteous communication you were pleased to address to me under date of the 30th ultimo, you state that the minister of the United States of America, by instruction of his Government, desires to be furnished with the data referred to in the document accompanying the same. I have now the honor to transcribe to you the report of the general direction of accounts and of the general direction of customs, together with a copy of decree No. 149, to which reference is made in the last report.

"'[General direction of accounts of the Republic of Guatemala.]

"'JUNE 10, 1887.

"'Mr. MINISTER: I have the honor to inform you that in view of the general statement of revenues and expenses which this direction presents to your department for

transmission to the ordinary national assembly the probable revenues are estimated for the following year, and, as shown by the statement, comprise the following maritime customs:

"'DUTIES COLLECTED UPON THE GREATER PART OF THE MERCHANDISE IMPORTED INTO THE COUNTRY.

"'It has varied from 70 to 102 per cent. upon appraisement for merchandise in general; from 25 to 50 per cent. on threads, leather, carriages, pianos, etc.; 10 per cent. on machinery, books, and useful articles for instruction, industry, and agriculture, fine jewelry, etc.

'REVENUE.

"'From liquors: A tax of 25 to 45 cents collected upon each bottle of pure spirits of twenty degrees of Baume distilled in the country.

From licenses to sell domestic and foreign liquors, beer, etc.—

The above-mentioned revenues (customs and liquors) produc, eapproximately, annually	$3,000,000
Stamped paper, stamps, and the stamping of books produce annually	125,000
The $3 per thousand tax upon immovable property produces annually	100,000
The personal tax of $1.40 road tax, for those who commute in money, produces annually	80,000
The military contribution, or exemption from military service in time of peace, produces	50,000
The taxes upon slaughter-houses, flour, and the manufacture of salt produce, respectively, $110,000, $40,000, and $35,000 annually	185,000
Other revenues, estimated at	500,000
Telegraphs and post-offices	155,000
From the principal items of revenue which amount in the aggregate annually to	4,500,000

"'The estimate of the administrative service is made out by the chief of each bureau at the commencement of the economic year: he remits to the respective departments; the latter, after due examination, modifications, and approbation, remits it to the treasury department for inclusion in the general estimate; the partial estimates are again revised, the general estimate formed and sent to the legislative assembly, together with the estimate of revenues above mentioned. The assembly submits it to a committee of its members for such amendments as may be found expedient, as also for its suggestions in case of a deficit.

"'After having been discussed and approved by the National Assembly it is passed to the Executive for his sanction and publicity in the form of the annexed decree.

"'R. PEDROSA.'"

"'[Republic of Guatemala, general direction of customs and taxes.]

"'JUNE 14, 1887.

"'Mr. MINISTER: The data which the minister of the United States wishes to obtain are sufficiently detailed in the Assembly's decree No. 149 of the 25th May, 1886. This direction has the management of the direct and indirect taxes as set forth in the law of the Assembly relating to estimates, a copy of which I have the honor to inclose.

"'B. ARROYA.'"

"In transmitting to you the foregoing information, in reply to your official note above mentioned, and annexing a copy of the general estimate, I have the honor to remain, etc.

"MAURICIO RODRIGUEZ."

I inclose to your excellency the decree referred to, and have the pleasure to subscribe myself with sentiments of high consideration and esteem.

Your obedient servant,

LORENZO MONTÚFAR.

[Decree No. 149.]

MAY 31, 1886.

The Legislative Assembly of the Republic of Guatemala considering that in order to establish and maintain an equilibrium between the revenues and expenditures of the national treasury, especially under the difficult economic situation of the country, it is expedient to make some additions to the fiscal code in regard to the mode of preparing the estimates of public expenses and the disbursements of sums destined to the administrative service; it therefore—

DECREES.

ARTICLE 1.—In the partial estimate of each department of state shall be comprised only the expenses of the respective service of each. The expenses shall be classified by chapters, and the chapters shall be subdivided into articles sufficient for giving full details.

ART. 2.—The estimate of each department shall express in detail each one of the offices comprised in its service.

In the estimate of the war department shall be expressed in detail the number of generals, chiefs, and officers, as also the number and class of soldiers in each of the garrisons and detachments, of the Republic in service in time of peace.

ART. 3.—In treating of expenses for which the sum is limited by special laws, such authorized sum shall be expressed, and the unexpended balance thereof.

ART. 4.—Among the variable expenses of each department the following shall be considered:

(1) The estimated sum required for the retired list and pensions for the fiscal year.

(2) The expenses arising from contracts for public works, personal services, and the purchase of materials for the establishments or enterprises of the state.

(3) The estimated expenses for the payment of salaries of auxiliary officers or temporary employés who are to render service for a specified time during the year embraced in the estimate.

ART. 5.—Only the following obligations shall be allowed and paid by the state:

(1) Those comprised in the annual law of appropriations.

(2) Those recognized by law previous to that of appropriations.

(3) Those arising from an executory sentence of the tribunals of justice.

ART. 6.—The extraordinary expenses of the several estimates can not be paid except upon the following conditions:

(1) That the expense is authorized by a decree or resolution of the president and countersigned by the secretary of the respective department.

(2) That the order of payment shall be communicated to the paying office by the minister of finance.

Without these requisites no extraordinary expense shall be payable.

ART. 7.—For the payment of sums determined by a sentence of the tribunals of justice, an order of the minister of finance, registered by general direction of accounts, shall be required.

ART. 8.—The general direction of accounts shall open with each department an account of the sums authorized to be expended by their respective estimates and by previous laws.

ART. 9.—Every project of a law presented to the Assembly requiring an authorization of expenses, not provided for in the appropriation act, shall be accompanied by a proposal of the means for covering such expenses.

ART. 10.—The executive power can not modify the law of appropriation by suppressing, reducing, or increasing the resources voted by the Assembly, nor by increasing the pay of the employés.

ART. 11.—The executive power can not concede exemptions from nor reductions of the public taxes, nor extend the time of payment, except in the cases and in the form which the laws determine. Neither can he donate the funds nor effects of the state.

ART. 12.—The act of appropriation shall fix annually the amount of the public debt and the sums destined for the service thereof.

ART. 13.—The sums specified in the appropriations shall not be applied to other expenses, distinct from those which were voted upon, except when the transfer of credits shall be made within the same chapter of the estimates.

ART. 14.—The deficiencies of each appropriation shall be adjusted annually and they shall be taken into account in forming the next estimates.

ART. 15. The executive power shall present to the assembly, during the first fifteen days of its ordinary sessions, the project of the act of appropriations and the general account of revenues and expenses. Within the same period the director-

general of accounts shall present to the assembly the open account of each department, in conformity with the prescriptions of article 9, in which shall appear the expenses incurred up to the 31st of December of the previous year, so that the assembly may take cognizance whether the expenses have been greater than authorized by the act of appropriation, or the special laws, and may adopt measures in accordance therewith.

Let it be passed to the executive for its publication and observance.

Given in the hall of sessions, in Guatemala, May 21, 1886.

Miguel Asturias, secretary; Manuel Ramirez, vice-president; Ventura Saravia, secretary,

PALACE OF THE GOVERNMENT, *Guatemala, May* 31, 1886.

Let it be complied with.

M. L. BARILLAS.

MANUEL CARDENAS,
Minister of Finance.

ARGENTINE REPUBLIC.

REPORT OF MINISTER HANNA.

I have the honor to furnish the Department with the general idea of the methods by which the revenues of the national Government of the Argentine Republic are realized. In the eyes of older governments, of riper experience, which have learned the lesson of taxation under the smarting conditions of experiment, and even then, in many cases, with slight progress, the system herein detailed may seem crude and in many respects ill-advised; nevertheless, the revenues required are easily and abundantly provided. I have great pleasure in this connection in noting a fact of importance to every citizen of the United States, that when the Government, mindful of the burdens borne by its laboring classes, has tried to cheapen the cost of their needs by the arrest of private speculation with the cooperation of a custom-house police, the Government has not taken advantage of the opportunity, as some others of the South American States have done, to defeat a purpose so radically important to them by the infliction of an export tax for the consumer to pay or to elect the alternative of denial. The Government now has no export tax of any kind; its wools, hides, tallow, frozen meats, and grain products go out to the markets of the world for unrestricted sale to any who may want to buy them.

BAYLESS W. HANNA.

UNITED STATES LEGATION,
Buenos Ayres, February 9, 1888.

TAXATION LAWS OF THE ARGENTINE REPUBLIC.

[Inclosures in Mr. Hanna's report.]

1. Custom-house duties.—2. Storage and handling.—3. Stamped paper.—4. Lighthouses and buoys.—5. Moles.—6. Postal tariff.—7. Additional tax.—8. National telegraph.—9. Sanitary visits in harbor.—10. Licenses.—11. Real-estate tax.

CUSTOM-HOUSE DUTIES.

The law of October 11, 1874, imposes a duty of 20 per cent. ad valorem on all imported merchandise; and as an exception, one of 25 per cent. on liquors and tobacco, of 10 per cent. on wrought gold and silver, silk for sewing or embroidering,

coal, timber, agricultural implements, etc., and of 3 per cent. on precious stones, whether loose or mounted in gold or silver.

The following are admitted duty free: Articles intended for divine worship, breeding cattle, printing presses and implements, ships' engines, and machinery for starting new industries; immigrants' furniture and tools, plants, etc.

All sorts of produce or manufactured goods are also free of export duty, but the following pay 4 per cent. of their value: Animal oil, horns, jerked beef, horsehair, hoofs, bones and bone-ash, wool (dirty or washed), ostrich feathers, tallow, and grease.

The law of 1876 also imposes a tax of 20 per cent. on all imported foreign merchandise; as an exception, twenty-six different articles, which may be made in the country, are to pay 40 per cent., and eleven more 30 per cent. Jewelry, plows, steam engines, wrought gold and silver, lumber, iron, silk, etc., are subject to a duty of 10 per cent., and loose precious stones to one of 3 per cent. Wheat pays $1.60 and flour $4 per 100 kilos.

The law of 1877 subjects imported merchandise in general to a 25 per cent. ad valorem duty, reduces the 40 per cent. of the previous year to 35 per cent., the 30 per cent. to 15 per cent., and introduces no change in the 10 per cent. duty. Fencing and telegraph wire, quicksilver, staves, casks, barrows, etc., printed books with paper bindings, printing machines and plant, paper, and lithographic presses are to pay 5 per cent. No change is made in the duty on precious stones, wheat, or flour. The same articles as in previous years are free of duty.

The law of October 18, 1877, retains the general tax of 25 per cent. and establishes exceptional rates of 50, 40, 35, 15, 10, 5, and 3 per cent., retaining the specific duty already established on wheat and flour, and making it include also maize and maize flour.

Several articles are again declared duty free, and all sorts of produce and manufactures of the country are to be free of export duty, with the exception of the articles mentioned in the law of 1875, and of certain others which have been added thereto.

The law of October 19, 1879, is similar to that of 1878. That of 1880 maintains the 25 per cent. duty on all foreign imported goods, but restricts the exceptional rates, suppressing those of 35 and 15 per cent.; it also reduces the 3 per cent. duty on precious stones to 2 per cent.

The following articles are added to the list of those chargeable with a specific duty: Tea, 25 cents; coffee, 8 cents; yerba mate, 5 cents; vermicelli, 7 cents; starch, 5 cents; fine biscuits, 9 cents.

The imported articles which are duty free are next enumerated, 6 per cent. export duty being again imposed on certain articles which are mentioned.

The laws of 1881 to 1886 are similar to the foregoing, with slight alterations that do not call for special mention, if we except the reduction of the export duty to 4 per cent. on wool, sheepskins (in the grease or washed), skins of wild animals, and ostrich feathers, and to 3 per cent. on animal oil, horns, bone-ash, horsehair, hide cuttings, grease, tallow, bones, and hides not included in the foregoing. The import duty is raised respectively to 25, 15, and 12 cents per liter of kerosene and per kilo of stearine or paraffine candles, an extra 1 per cent. being added to all import duties.

Export taxes of every kind repealed by last Congress.

WAREHOUSING AND HANDLING.

This duty is chargeable according to the articles and divisions established in the law. As their number is very extensive, it will suffice to say that there are fourteen divisions; that the articles comprised in the first division, not to exceed 30^{mn} in value, are to pay .4 per cent. a month on their valuation for warehousing, and .8 per cent. for inwards and outwards handling; whilst those belonging to the last division, which we reach by a gradual descent, are to pay .06 per cent. a month per quintal for warehousing, and .12 per cent. for handling. Heavy articles to pay 0.80^{mn} a ton.

The law for 1876 and 1877 introduces certain modifications in the 5th, 6th, 8th, 13th, and 14th divisions, there being no other alterations introduced.

The laws in force from 1878 to 1886 introduce a new system, and base the warehouse tax on the weight, bulk, or capacity of the cask or other vessel and on the value of the article. Thus 6 cents per month are paid for every 100 kilos; 4 cents for every 100 cubic decimeters; 8 cents for every 100 liters; and on the value, according to a scale, 40, 30, 20, or 15 cents per month.

Handling is to be equivalent to two months' warehousing. Salt, coal, etc., pay 6 per cent. for handling.

STAMP LAW.

The law of October 1, 1873, which was in force in 1875, created twenty-one classes of stamped paper for the use of the national administrations, officers, and courts. The first class, for obligations of from $25 to $100, for a term of ninety days, is of 12 cents, and the last, reached by a gradual scale, for those of $25,000 to $30,000, is of $30 for the same term and of $43 for a further term. From $30,000 upwards, as many stamps must be used as the value of the obligation requires, whatever may be the term of payment.

The other clauses of the law confine themselves to determining the paper that is to be used for the different documents, in accordance with the foregoing scale, and to providing the necessary measures for avoiding the evasion of the law, and for insuring the better collection of the tax.

The laws of 1876 and 1877 maintain the same classes, the only difference being that they begin with a 10-cent stamp. Some other slight alterations are introduced, and the law finishes with the same prices for stamps as previously.

The law of 1878, in force in 1879, increases the number of classes to twenty-nine, beginning with the first of 10 cents for obligations of from $20 to $100, and terminating in a $100 stamp for those of from $90,000 to $100,000. Above this latter figure a stamp must be used equivalent to 1¼ per mil of the same. If the term be over ninety days, 1 per mil is to be paid for every such term; in no case, however, is the value of the stamp to be more than 1 per cent.

If no term be specified, a stamp representing ¼ per cent. of the total value of the obligation is to be used, and if no sum should be specified, then each sheet will require a $10 stamp.

In the laws of 1883 to 1886, obligations without any specified term are to pay the stamp which would belong to a period of one year, while the laws from 1882 to 1886 prescribe that for obligations of more than $100,000 a stamp of 1 per mil is to be used, instead of one of 1¼ per mil.

LIGHT-HOUSES AND BUOYS TAX.

This tax is fixed as follows by the law of September 29, 1875:

For vessels from beyond the River Plate, $0.06 a ton. For those from any part of the River Plate, above 20 tons, $0.01 per ton. Vessels of more than 20 tons and less than 50, every time they enter port or sail, $0.20.

Lighters are classed according to a scale, of which the lowest is for vessels of between 5 and 20 tons, which pays 30 cents a month, and the highest for those of from 201 to 300 tons, which pays $1.50 a month, while those of 300 tons and upwards pay $2.

The laws of 1876 to 1882 contain the same dispositions as those of the previous year, but an alteration is introduced in those for 1883–'84. Vessels from beyond the River Plate are to pay 3¼ cents a ton on entrance into any port, and the same on leaving. Coasters of more than 5 tons are to pay 1 cent per ton on entering port, and the same on leaving; lighters pay 2 cents a month. Vessels in ballast pay half rates.

The laws of 1885 and 1886 contain the same dispositions, but craft of 5 tons are excepted, as also ships in distress and that do not take in or discharge cargo.

MOLE TAX.

The law of September 28, 1875, authorizes a charge of 5 cents a ton for the use of the moles in the Riachuelo and at the custom-house in Buenos Ayres.

That of September 13, 1876, contains a like provision, while that of August 20, 1877, raises the tax to 8 cents, which rate is maintained by those of October 1, 1879, and October 14, 1882. That of October 24, 1883, raises it to 15 cents per ton for loading and unloading. The law of 1884 changes the rate to 2 cents per ton up to 100 tons, and to 1 cent above this tonnage.

It is also prescribed that the dues in the Riachuelo Port for loaded vessels are to be as follows:

	Per ton.
Sailing ships of less than 50 tons	$0.05
Sailing ships from 50 to 100 tons	.07
Sailing ships from 101 to 150 tons	.15
Sailing ships from 151 upwards	.30

Vessels of greater tonnage shall pay 10 cents a ton, and steamers half the above-mentioned rates.

GOVERNMENT WHARVES.

Riachuelo port dues.—These two taxes, which only formed one in the 1884 law, were separated in those of 1885 and 1886. According to the former of these, ships which load or unload at the government wharves are to pay 2 cents a day per ton register, up to 100 tons, and 1 cent per ton for the excess.

In the latter law the scale commences at 30 tons for the payment of Riachuelo dues, instead of at 50 tons as previously, but no alteration is introduced in the taxes imposed. Steamers are to pay half rates, and vessels in ballast, as also lighters, 5 cents a ton, whatever their tonnage may be.

POSTAL TARIFF.

According to the law of September 20, 1875, the rate of postage on letters, both inland and foreign, is 8 cents for a weight not exceeding 8 grams, 15 cents not over 24 grams, etc.

Registered letters pay 25 cents each, besides the preceding rates.

Prices current and commercial circulars pay 1 cent for each 8 grams or fraction of this weight.

Letters to be forwarded from one post-house to another pay 10 cents per league and 20 cents postage.

Books, pamphlets, engravings, lithographic pictures, music paper, and printed matter of every description, with the exception of newspapers, which are free, pay 5 cents for each 500 grams.

The law also contains certain dispositions relating to the rental of boxes and to house delivery.

In the law of September 28, 1876, the rate for letters is 8 cents for each 15 grams. Postal cards, uninclosed, 130 millimeters by 76 millimeters, pay 4 cents; newspapers, 2 cents for every 250 grams; engravings, lithographic pictures, books, etc., 4 cents per 150 grams; any registered package pays 25 cents more than the postage.

The laws of October 3, 1877, the same date 1879, and October 22, 1880, only introduce trifling alterations in some minor points.

Those of December 15, 1881, and October 20, 1882, divide the correspondence into inland, being that which is sent from one part of the Republic to another, and local, or that which is to be delivered in the same place where it is posted. The inland rate is the same that has already been given: 8 cents for letters, reply-paid postal cards and business documents, per 250 grams; and 4 cents for ordinary postal cards. The local or town rate is half the above, while newspapers, printed matter, and samples pay the same rate in both cases.

The law of October 22, 1883, contains no variation worthy of mention, but those of 1885 and 1886 introduce another rate of 1 cent for each 50 grams of the printed matter mentioned in the latter part of article 4, and also one of 4 cents for the first 100 grams and 1 cent for each additional 50 grams for samples and packages of seeds.

In the town correspondence, the only alteration is an extra rate of 1 cent for every additional 50 grams of business documents.

EXTRA DUTY.

The law of September 6, 1866, which has remained in force ever since, imposes an additional duty of 5 per cent. on imported goods, with the exception of silks, jewelry, and precious stones, and instruments with gold or silver handles, and also one of 2 per cent. on exports.

NATIONAL TELEGRAPH.

The law of October 13, 1876, establishes a rate of 30 cents for the first ten words (inclusive of the date and of name and address of sender and of receiver), and of 20 cents for each ten words following; an extra rate of 30 cents, regardless of the number of words, is also stipulated for the acknowledgment, and one of 30 cents also for a prepaid reply, if not above ten words.

Provision is also made for telegrams addressed to several different parties, for messages to be repeated, and also for such as are classified as urgent, and even for conferences from one office to another. The foregoing are subject to different rates, amounting in some cases to four times the ordinary rate, while the conferences are to be charged at the rate of $6 for the first quarter of an hour, and $2 for every additional five minutes.

The law of 1878 raises the price to 40 cents for the first ten words, and also for the acknowledgment.

No other alteration of importance was introduced till October 22, 1883, when the rate was fixed at 4 cents ^{mn} for each of the first ten words of an ordinary telegram and 2 cents for each following word; 40 cents extra to be paid for the acknowledgment, four times the ordinary rate for repeated telegrams, and three times that rate for those classified as urgent.

Next follow the prices to be paid for telegraphic conferences and for press telegrams, and also the deduction of 50 per cent. made on those passing over the Transandine Line.

The law for 1885 is similar to the above, but that for 1886 establishes a rate of 20 cents for ordinary telegrams of not more than five words, and of 4 cents a word for the five following, this being the only alteration introduced.

SANITARY VISIT IN PORT.

The law of September 3, 1877, establishes a tax of 2 cents per ton on every merchant vessel entering a port of the Republic, and of 4 cents a ton on any proceeding from an infected port or which has no bill of health.

Vessels in ballast and bringing no passengers are to pay half the rate.

No alteration has been introduced by subsequent laws.

LICENSES.

The law of December 17, 1881, imposes a license tax on any person carrying on any branch of trade or commerce or any profession, whether in the capital or in any national territory.

As the number of classes into which the different categories are divided is considerable, I will confine myself to stating the maximum and the minimum of the licenses.

There are 6 categories in the capital and a like number in the territories of the Republic. In the first mentioned there are 149 classes, the highest of which, in the first category, is $3,000 and the lowest $6. In the latter there are 9, of which the highest category is $600 and the smallest $10.

Then follow some regulations for the classification, according to their respective importance, of the trades and professions that, being carried on in the provinces, may also have to pay national taxes. Other general regulations are also appended.

In the law of October 20, 1882, no separation is made between the capital and the nation, but a division is established between fixed and proportionate licenses, the highest of these latter being $3,200 and of the former $2,000, both diminishing to less than $10.

The law of 1885 establishes 44 categories, the first amounting to $4,000^{mn} and the last to $1^{mn}. All matters susceptible of taxation are comprised in this scale, the number of proportionate licenses being 37; of fixed licenses, 10, and of maritime licenses, 6.

The law of 1886 establishes 46 categories, the first amounting to $8,000^{mn} and descending gradually to $1^{mn}. The proportionate licenses are divided into 35 categories, the fixed licenses into 11, and the maritime into 6. Within these limits everything susceptible of paying a license is comprised.

REAL-ESTATE TAX.

The law of December 9, 1881, imposes a direct tax of 5 per mil on the actual value of all lands and buildings owned by private individuals in the capital of the Republic and in the territories subject to the national jurisdiction.

The other articles of this law are simply regulations in connection with the application of the same, and it is not necessary to reproduce them here.

The laws of October 17, 1882, October 25, 1884, and October 3, 1885, confirm the 5 per mil tax as above mentioned.

National revenue (Argentine Republic) from 1875 to 1886.

Sources of revenue.	1875.		1880.	
	Estimated.	Collected.	Estimated.	Collected.
Import taxes	$14,900,000	$12,893,533	$13,300,000	$12,055,797
Additional import taxes	3,596,000			
Export taxes	2,300,000	2,616,610	2,500,000	3,520,394
Additional export taxes	1,200,000			
Warehousing and handling	600,000	527,954	350,000	299,771
Stamped paper and licenses	430,000	382,529	650,000	573,581
Riachuelo wharves	60,000	23,282	.....	.....
Removal of stone and sand from Martin Garcia	10,000	.....	.....	.....
Interest on public funds lent to San Juan and Santiago	14,273	2,936	.....	4,000
Interest on public loan	100,000	.....	344,284	205,861
Light-houses and buoys	80,000	35,879	40,000	32,250
Post-office	200,000	214,308	450,000	337,255
Telegraphs	110,000	79,553		113,718
Rio Cuarto Railway	100,000	.....	18,000	.....
Primer Entrerriano Railway	30,000	7,701	116,000	2,742
Interest on 17,000 shares Central Argentine Railway	116,020	90,434	800,000	91,007
Sundries	150,000	332,078	457,989	1,544,339
Villa Maria to Villa Mercedes Railway	.....	.....	48,777	.....
Cordoba to Tucuman Railway	.....	.....	.....	644,187
State Railway	.....	.....	15,000	10,953
Sanitary visits	.....	.....	160,000	158,450
Total	23,996,293	17,206,747	19,250,000	19,594,306
Real deficit	.....	4,231,892	.....	.....
Calculated surplus	2,558,204	.....	603,018	.....
Real surplus	.....	.....	.....	947,324
Total	21,438,689	21,438,689	18,646,982	18,646,982

Sources of revenue.	1885.		1886.	
	Estimated.	Collected.	Estimated.	Collected.
Import taxes	$26,736,386	$22,459,741	$26,000,000	$26,805,496
Additional import taxes	900,000	746,285	800,000	888,381
Export taxes	2,927,428	2,375,815	3,200,000	1,968,082
Warehousing and handling	574,000	673,668	550,000	549,801
Stamped paper and licenses	2,400,000	2,556,252	2,700,000	2,836,102
Riachuelo wharves	160,000	291,441	.....	.....
Light-houses and buoys	95,000	109,232	140,000	111,440
Post-office	650,000	586,494	810,000	751,446
Telegraphs	200,000	243,956	280,000	248,330
Primer Entrerriano Railway	8,000	10,607	8,000	10,558
Interest on 17,000 shares Central Argentine Railway	120,000	197,392	140,000	214,081
Sundries	475,875	1,427,077	1,470,000	1,737,199
Villa Maria to Villa Mercedes Railway	70,000	1,008,885	1,350,000	1,094,978
Cordoba to Tucuman Railway	160,000	1,535,043	2,000,000	1,633,217
Sanitary visits	30,000	38,678	40,000	38,144
Real-estate tax	1,200,000	1,159,441	1,250,000	1,598,668
Timber felling	15,000	19,318	20,000	13,482
Water-works	500,000	320,400	500,000	371,645
Judicial deposits	90,000	72,750	80,000	74,271
Railway guaranties returned	50,000	.....	.....	.....
Penitentiary	10,000	.....	2,000	.....
Third February park	2,500	.....	2,500	.....
National bank shares	1,000,000	483,601	560,000	1,209,002
Mint, profit on coinage	50,000	.....	5,000	65,565
Total	40,494,184	36,416,182	42,007,500	42,250,152

Interior department expenditure from 1875 *to* 1886.

Classification.	1875.		1880.	
	Estimates.	Expended.	Estimates.	Expended.
Presidential expenses	$41,160	$41,160	$46,920	$47,667
Ministerial expenses	32,340	31,583	26,040	26,025
National Congress	518,933	438,604	530,578	438,896
Post-office and telegraphs	733,715	649,225	612,760	558,030
Patent office	4,908	4,908	.....	.....
Central statistical office	17,100	16,194	.....	.....
Guarantied railways	263,000	88,060	480,000	480,000
Villa Maria and Rio Cuarto Railway	99,828	99,828	.....	.....
Primer Entrerriano Railway	27,600	17,213	12,000	12,000
Central Northern Railway	.....	.....	262,080	262,080
Andine Railway	.....	.....	101,520	96,182
Civil engineers' department	.....	.....	78,600	72,206
Agricultural department	45,923	45,923	8,880	8,880
Public works	604,000	86,299	9,600	4,716
Roads and bridges	152,000	61,026	9,600	.....
Repair of roads	.....	.....	33,000	32,222
Immigration	318,364	141,494	246,086	245,301
Government of the Chaco	54,000	13,892	47,367	41,627
Government of the Patagonia	.....	.....	11,148	6,664
Subvention to provinces	225,000	225,000	52,488	52,488
Pensions and superannuations	6,864	6,264	6,264	6,129
Coal mines	25,000	.....	.....	.....
Sundries	20,000	19,962	18,000	17,913
Amount not spent	.....	1,102,580	.....	173,765
Total	3,189,735	3,189,735	2,582,881	2,582,881

Classification.	1885.		1886.	
	Estimates.	Expended.	Estimates.	Expended.
Presidential expenses	$62,122	$62,002	$62,122	$61,210
Ministerial expenses	101,580	95,606	104,424	102,902
National Congress	843,230	818,340	853,110	819,981
Post-office and telegraphs	1,433,720	1,386,408	1,636,344	1,581,584
Lands and colonies	157,380	78,369	75,144	74,735
Guarantied railways	264,000	244,942	384,000	384,000
Primer Entrerriano Railway	14,400	14,400	14,400	14,400
Central Northern Railway	710,100	710,100	986,208	986,208
Andine Railway	485,192	485,192	624,572	624,572
Agricultural department	152,228	142,845	136,104	136,102
Board of health	19,584	18,628	.....	.....
Police	1,245,108	1,226,326	1,364,400	1,350,978
Public works	329,076	305,040	338,592	331,656
City improvements	221,556	212,626	205,728	204,378
Hydraulic works	150,000	148,527	98,000	98,000
Roads and bridges	30,000	17,462	30,000	30,000
Repair of roads	120,000	120,000	84,000	84,000
Immigration bureau	260,088	266,408	282,180	269,927
Government of the Chaco	21,036	18,416	30,072	28,219
Government of the Patagonia	67,272	38,072	251,962	200,314
Government of the Misiones	156,243	126,839	60,443	57,569
Subvention to provinces	56,988	56,988	56,988	56,988
Pensions and superannuations	16,791	16,389	39,192	30,935
Beneficent society	508,387	471,118	535,870	532,165
Improvement of breeds	80,000	19,625	.....	.....
Supplementary credits	480	.....	10,399	.....
Special laws	2,819,678	674,798	.....	.....
Amount not spent	.....	2,023,836	.....	197,436
Total	10,330,889	10,330,889	8,259,254	8,259,254

Foreign affairs expenditure from 1875 *to* 1886.

Classification.	1875.		1880.	
	Estimates.	Expended.	Estimates.	Expended.
Ministerial expenses	$25,776	$25,775	$44,400	.....
Legations	167,712	146,738	73,440	.....
Total	193,488	172,513	117,840	.....
Amount not spent	.....	20,975	.....	.....
Total	193,488	193,488	117,840	.....

Foreign affairs expenditure from 1875 to 1886—Continued.

Classification.	1885.		1886.	
	Estimates.	Expended.	Estimates.	Expended.
Ministerial expenses	$111,756	$111,756	$104,184	$104,184
Legations	256,500	242,088	246,912	243,687
Special laws	90,000	86,873	.....	.....
Supplementary credits	.....	.....	71,296	.....
Traveling expenses	24,000	24,000	84,828	120,601
Total	482,256	464,662	507,220	468,472
Amount not spent	.....	17,594	.....	38,748
Total	482,256	482,256	507,220	507,220

War and navy department (Argentine Republic) estimates and expenditure from 1875 to 1886.

Navy.	1875.		1880.	
	Estimates.	Expenditure.	Estimates.	Expenditure.
Sub-secretary's office	$339,321	$307,186	$11,160	$11,160
General staff	.....	.....	28,652	22,518
Roll of officers	.....	.....	15,840	8,084
Navy medical staff	.....	.....	27,000	26,998
Hydrographical studies	.....	.....	8,100	4,000
Special laws	545,200	77,658	.....	.....
Rations	40,800	40,800	.....	.....
Cadets' clothing	.....	.....	185,108	150,865
Sundries	.....	.....	13,800	13,785
Zárate arsenal	.....	.....	4,080	4,067
Stores	.....	.....	205,092	203,667
Lazarettos	.....	.....	2,400	.....
Naval artillery	.....	.....	20,850	348
Artillery workshops	.....	.....	9,000	5,600
Sums unspent	.....	509,677	.....	77,440
Total	985,321	985,321	640,782	640,782

Navy.	1885.		1886.	
	Estimates.	Expenditure.	Estimates.	Expenditure.
Sub-secretary's office	$28,992	$28,864	$29,592	$29,592
General staff	42,786	42,635	42,612	41,763
Roll of officers	39,600	39,576	42,000	41,989
Navy division	15,978	13,198	8,124	8,123
Iron-clads	189,202	186,844	253,224	238,512
Torpedo division	74,605	69,652	105,960	89,986
Gun-boats	179,338	158,027	134,208	132,426
Transports	56,326	54,685	50,568	49,290
Corvette "Cabo de Hornos"	8,199	3,060	.....	.....
Dispatch boats	47,190	45,846	41,940	38,346
Smaller craft	47,548	31,974	36,756	34,772
Rio Negro squadron	67,605	58,447	69,180	64,036
Pilots	23,484	23,436	23,484	22,028
Pursers, accountants, and paymasters	20,168	20,140	54,048	22,080
Marine infantry	68,396	51,867	.....	.....
National hygiene bureau	55,044	55,043	54,516	58,264
Navy medical staff	89,592	89,591	64,872	64,863
Naval school	118,086	117,006	196,183	186,377
School of navy officers	66,895	66,047		
Hydrographical studies	37,800	37,800	37,800	37,800
Harbor prefects	121,358	119,986	109,392	108,860
Sub-prefects on the Paraná	116,764	104,783	195,888	102,461
Sub-prefects on the Uruguay	56,126	54,176	49,416	48,076
Sub-prefects on the Atlantic and River Plate	118,824	95,768	100,632	92,618
Fares and sundries	117,000	115,940	.....	.....
Special laws	406,000	316,172	.....	.....
Supplementary credits	286,402	.....	229,968	.....
Arsenals	123,370	120,898	121,080	118,142
General navy commissariat	1,022,100	1,014,887	885,708	1,110,169
Sundries	150,000	150,000	168,342	166,280
Sums unspent	.....	218,533	.....	81,415
Total	3,802,273	3,802,273	2,963,218	2,963,218

War and navy department, etc.—Continued.

Army.	1875.		1880.	
	Estimates.	Expenditure.	Estimates.	Expenditure.
Ministerial expenses	$41,445	$39,886	$45,660	$39,317
General inspection of arms	57,132	56,362	44,100	39,862
Warriors of the independence	207,843	282,525	218,364	133,240
Roll of officers				
Indian charges	223,556	223,110	96,000	20,467
Army	1,183,546	659,457	1,070,408	1,061,373
Military college and academy	.....	.....	57,816	51,455
Arsenal	1,913,372	1,878,043	77,976	76,583
Commissariat	.....	.....	65,208	64,136
Clothing	.....	.....	300,000	299,968
Rations	.....	.....	1,320,000	1,315,707
Pensions	468,000	468,000	596,400	611,137
Contingent expenses	276,000	273,825	104,400	152,487
Supplementary credits	.....	.....	65,070	.....
Civil administration	122,676	118,732	75,264	59,283
Extra pay, campaigning	255,000	85,368	.....	.....
General inspection of frontiers	305,000	92,751	174,372	96,226
Law September 28, 1872	.....	.....	96,000	95,638
Pensions and back pay	.....	.....	96,000	94,597
Sums not spent	.....	885,917	.....	300,547
Total	5,013,926	5,013,926	4,508,081	4,508,081

Army.	1885.		1886.	
	Estimates.	Expenditure.	Estimates.	Expenditure.
Ministerial expenses	$56,283	$53,020	$58,464	$57,764
General inspection of arms	1,082,695	1,070,883	1,181,308	1,159,119
Warriors of the independence	36,121	32,120	33,240	27,458
Roll of officers	.....	.....	249,228	202,086
Divisional staffs	249,926	211,650	.....	.....
Indian charges	144,000	242,588	360,000	347,882
Martin Garcia	17,667	17,657	.....	.....
National guard of the capital	44,070	44,070	54,840	54,828
Enlistment bureau	70,942	70,942	32,988	32,838
Army	1,734,928	1,379,454	1,633,968	1,504,434
Military college and academy	111,021	106,312	106,872	106,848
School of corporals and sergeants	36,831	35,202	36,708	36,704
Clothing	402,000	402,000	432,000	431,971
Rations	1,380,000	1,378,279	1,269,180	1,408,668
Pensions	711,152	711,491	766,649	808,558
Contingent expenses	490,200	390,441	483,600	492,909
Enlistment	180,000	179,950	180,000	179,997
Frontiers	48,000	39,884	60,000	59,929
Special laws	639,612	275,839	.....	.....
Suplementary credits	112,129	.....	287,375	.....
Overspent	.....	545,467	.....	218,829
Total	7,547,581	7,547,581	7,175,220	7,175,220

Justice, worship, and public instruction department estimates and expenditure from 1875 to 1886.

Classification.	1875.		1880.	
	Estimates.	Expenditure.	Estimates.	Expenditure.
Ministerial expenditure	$26,600	$32,993	$29,100	$29,100
Library and distribution of books	6,880	6,729	.....	.....
Federal courts	154,104	142,864	148,752	148,159
Fees of *ad hoc* prosecutors	5,400	1,926	4,800	6,847
Pensions and superannuations	2,400	2,400	10,440	10,440
Contingent justice expenses	3,600	3,517	6,000	5,663
Bishoprics	208,844	188,942	163,840	162,388
Ecclesiastical subventions	39,000	37,604	21,600	24,801
Contingent worship expenses	4,800	4,289	3,600	3,469
Public instruction	839,343	620,325	.....	.....
Purchase of books	18,000	18,000	.....	.....
Normal schools	90,120	56,828	195,080	161,395
Inspection of colleges	7,080	7,080	3,660	3,618
Astronomical observatory, etc	31,040	31,040	.....	.....
Meteorological office	8,100	3,375	.....	.....
Popular libraries	21,696	16,543	.....	.....
National school board	4,056	4,056	251,880	68,645
Subvention for fomenting public instruction	501,600	319,505	.....	.....
Secondary education	.....	.....	321,096	313,634
Superior and professional education	.....	.....	128,940	120,130
Scientific institutions	.....	.....		
Repairs and furniture	.....	.....	34,800	27,371
Complementary education	.....	.....	25,200	23,255
Schools for both sexes	.....	.....	15,660	9,724
Public instruction contingent expenses	12,000	11,915	10,644	10,267
Special laws	5,000	1,720	14,296	.....
Sums not expended	.....	507,302	.....	260,904
Total	2,017,268	2,017,268	1,389,368	1,389,368

Classification.	1885.		1886.	
	Estimates.	Expenditure.	Estimates.	Expenditure.
Ministerial expenditure	$45,684	$45,575	$48,048	$47,952
Federal courts	80,348	76,852	78,864	75,244
Administration of justice in the capital	792,612	754,577	618,296	606,038
Pensions and superannuations	.....	.....	26,680	26,308
Penitentiary	207,264	190,521	205,008	204,283
Correctional prison				
Contingent justice expenses	40,800	39,837	198,888	186,573
Bishoprics	133,464	122,897	197,981	186,024
Ecclesiastical subventions	.....	.....	41,800	37,000
Contingent worship expenses	191,799	28,613	28,800	26,498
Public instruction	504,060	498,960	535,108	533,713
Normal schools	575,616	514,351	668,888	662,455
Subvention for fomenting public instruction	1,431,672	1,420,649	1,489,116	1,488,392
Secondary education	522,756	481,086	554,700	554,535
Superior and professional education	509,312	490,971	.....	.....
Common education	.....	.....	528,060	528,059
Public instruction contingent expenses	.....	.....	27,000	27,459
Special laws	180,633	31,631	.....	.....
Deaf and dumb institute in the capital	5,748	5,748	20,000	20,000
Superannuations	16,744	15,680	38,067	36,820
Sums not expended	.....	480,632	.....	51,810
Total	5,244,512	5,244,512	5,301,100	5,301,100

National finance department expenditure from 1875 to 1886.

Classification.	1875.		1880.	
	Estimated.	Expended.	Estimated.	Expended.
Public debt and use of credit	$8,262,249	$7,551,506	$8,438,857	$7,239,179
Ministerial expenditure	33,360	32,813	29,520	32,549
Public credit department	16,560	16,560	15,240	16,440
General accountant's department	150,072	148,327	81,900	81,900
Treasury	.....	.....	11,940	12,564
Revenue department	.....	.....	49,380	50,562
Stamp office	13,044	13,044	12,240	11,238
General revenue office	1,425,339	1,325,146	718,440	725,252
Liquidating commission	8,448	8,448	.....	.....
Pensions and superannuations	15,824	14,244	10,163	9,881
Government buildings	96,000	21,709	18,000	22,430
Light-houses	.....	.....	8,400	8,300
Coast-guard steamers	20,000	.....	.....	.....
Contingencies and sundries	48,000	39,035	24,000	92,672
Sums unspent	.....	918,124	.....	1,110,113
Total	10,068,956	10,068,956	9,413,080	9,413,080

Classification.	1885.		1886.	
	Estimated.	Expended.	Estimated.	Expended.
Public debt and use of credit	$14,030,446	$11,835,701	$13,962,361	$12,450,800
Ministerial expenditure	56,604	56,604	70,224	70,224
Public credit department	21,120	21,120	21,120	21,120
General accountant's department	159,960	159,960	159,960	159,960
Treasury	17,088	17,059	15,888	15,888
Mint	68,040	66,792	60,792	60,792
Revenue department	146,284	139,743	109,876	109,850
Stamp office	16,620	16,620	16,620	16,620
Land tax and license office	35,604	35,359	40,404	40,404
Custom-houses in the province of—				
Buenos Ayres	75,888	62,546	75,888	75,615
Santa Fé	154,212	149,696	154,032	153,897
Corrientes	70,128	66,771	70,848	70,755
Entre Rios	102,216	98,969	108,140	108,140
Córdoba	8,940	.....	.....	.....
Mendoza	12,708	11,885	12,708	12,708
San Juan	12,552	12,261	12,552	12,552
La Rioja	1,704	1,704	1,704	1,704
Catamarca	3,408	2,709	3,408	3,258
Salta	14,976	13,739	14,976	14,981
Jujuy	15,972	14,628	15,972	15,972
Custom-houses in the national territories	20,232	13,183	20,232	20,152
Liquidating commission	18,000	17,672	18,000	18,000
Pensions and superannuations	41,831	34,563	51,930	51,930
Government buildings	48,000	47,454	48,000	47,750
Surveys of national lands	48,000	46,670	.....	.....
Expenses for the adoption of the metrical system	1,200	.....	1,200	1,200
Supplementary credits	6,423	.....	95,000	.....
Special laws	.....	.....	1,000,000	.....
Contingencies and sundries	96,000	95,978	152,964	152,939
Sums unspent	.....	1,273,115	.....	2,514,044
Inspectorship of banks	4,344	4,344	.....	.....
Custom-house in the capital	862,284	853,739	912,192	1,005,986
Total	16,170,784	16,170,784	17,222,191	17,222,191

GENERAL SUMMARY OF THE EXPENDITURE FOR 1886.

	Granted.	Spent.	Unspent.
Estimates and supplementary credits.			
Interior	$8,259,254	$8,061,818	$197,436
Foreign affairs	507,220	468,472	38,748
Finance	17,222,191	14,708,147	2,514,044
Justice, worship, and public instruction	5,301,100	5,249,290	51,810
War	7,175,820	6,956,991	218,829
Navy	2,983,219	2,901,798	81,415
Total	41,448,798	38,346,516	3,102,282
Special laws and cabinet decrees.			
Interior	15,196,423	7,840,568	7,355,855
Foreign affairs	61,646	31,203	30,443
Finance	7,966,704	5,968,835	1,999,869
Justice, worship, and public instruction	889,878	633,721	256,157
War	1,772,871	1,374,788	397,583
Navy	424,455	242,705	181,750
Total	26,333,477	16,111,820	10,221,657
General result.			
Interior	23,455,677	15,902,386	7,553,291
Foreign affairs	568,866	499,675	69,191
Finance	25,210,895	20,696,982	4,513,913
Justice, worship, and public instruction	6,190,978	5,883,011	307,967
War	8,948,191	8,331,779	616,412
Navy	3,407,668	3,144,503	263,165
Total	67,782,275	54,458,336	13,323,939
Summary.			
Estimates and supplementary credits	41,448,798	38,346,516	3,102,282
Special laws and cabinet decrees	26,333,477	16,111,820	10,221,657
Total	67,782,275	54,458,336	13,323,939

CHILI.

REPORT OF MINISTER ROBERTS.

At the beginning of the ordinary session of congress, which meets in June of each year, the ministers of state—namely, of the interior; of foreign relations and colonization; of justice, worship, and public instruction; of finance; of war; and of marine—are required by law to submit the estimated expenditures of their respective departments for the ensuing year.

In the preparation of the estimates the ministers are aided by the intendents of the provinces and chiefs of bureaus in necessary expenditures the amounts of which are not fixed by law and come under the term of "variable."

The estimates of each ministry or department are printed in pamphlet form, with wide blank margins for notes or memoranda, for the use of members of Congress. After their submission to Congress they are referred to a committee, which, after a thorough examination and revision, reports on them, and are then passed with or without further alteration or amendments. If not passed during the ordinary session (from June 1 to August 31) an extra session of Congress is called, as it is necessary to have the estimates approved before the expiration of the year, to avoid serious disturbances in the regular administration of the government.

After their approval by Congress, the estimates are printed in one volume, called "Lei de presupuestos," the "Law of Estimates," of which a copy (for the present year) is sent under separate cover.

By reference to it, it will be noticed that the budget or estimates for the year 1887, as approved by Congress, amounts to $34,097,323.53, divided as follows:

For the ministry of the interior, $10,389,280.78, separated into fifty-three "partidas" or sections, and provides for the expenses of the senate and chamber of deputies (members of Congress are not paid a salary), salary of the president and counsels of state, the minister and his subordinates in its own department, salaries of the twenty-two intendents of provinces, their secretaries and officials, the administration of railroads, telegraphs, post-office, public highways, hospitals, dispensaries, statistics, etc.

For the ministry of foreign relations and colonization, $1,356,067.40. This provides for the expenses of the diplomatic and consular service and for the administration of various colonies in the southern part of Chili.

For the ministry of justice, worship, and public instruction, $5,853,104.60. This provides for the service of all the courts—superior and inferior—the civil registry, prisons and houses of correction, the bishoprics and parishes, the university and high schools, lyceums and common schools, national library, observatory, museum, botanical garden, school of arts, etc.

For the ministry of finance, $9,480,128.77. This provides for the interest on the foreign and home debt, the service of the treasury and subtreasuries through the provinces, custom-houses, mint, the national agricultural and mining societies, etc.

For the ministry of war, $4,539,823.32. This provides for the pay and maintenance of the army, for pensions, military school, militia, etc.

For the ministry of marine, $2,480,918.66. This provides for the pay and maintenance of the naval forces, supplies, ships, arsenals, pensions, naval school, light-houses. Each item (partida) in the estimates is credited with the amount allowed, and is paid out during the year as payments become due, against proper vouchers or receipts, by the treasurer or subtreasurers in the provinces throughout the reupblic.

The subtreasurers are required to render their accounts to the general treasurer or the accounting department at the end of the year. All sums or balances not used or drawn out for the purposes assigned revert back to the treasury.

After all accounts are rendered to and passed upon by the chief accounting bureau of the treasury the expenditures are printed in a large volume called "Cuentas general de entradas i gastos fiscales" (general account, of receipts and expenses of the state), in which is shown the amount allowed to each partida or item, the amount paid out against it, and the balance, if any, reverted back to the treasury.

Extraordinary expenditures, such as the paying of awards made by the international tribunals for damages caused to foreign residents in Peru by the late war, the redemption of saltpeter certificates issued by Peru, the building of new ships of war, coast defense, new railroads, etc., are provided for by special acts of Congress, by authorizing new loans or out of existing funds.

The estimated receipts for the present year are $35,000,000. The receipts for the year 1886 were $37,116,070.45, derived from the subjoined sources, the amounts of which are given to show the proportion and importance of the several imposts or taxes.

Customs: Duties on imports and exports, government warehouse charges, etc	$23,370,862.36
Railroads	6,395,321.91
Post-office and telegraphs	559,489.18
Mint	151,179.68
Sale of Government lands	898,324.55
Rent of national property	54,730.88
Toll (on national roads)	36,742.65
Tax on capital stock of incorporated companies	367,304.53
Inheritance tax	245,174.25
Land tax (impuesto agricola)	1,162,778.31
Tax on business and occupations	462,583.69
Tax on transfer of real estate	900,602.35
Stamps and stamped paper	449,929.15
Interest and discounts	225,399.40
Deposits passed to general accounts	942,926.49
Redemption of entails (censos)	81,392.89
Guano	266,062.93
Other incomes	545,265.25
Total	*37,116,070.45

In the above list will be noted a land tax (*impuesto agricola*). This tax took the place of the ancient tithes (*diezmo*) that were collected by or paid to the church. When the Government assumed the payment of the church service, salaries of bishops, parish priests, building and repairing parish churches, it also assumed the collection of the tithes, which was then changed to a land or farm tax, or rather a tax on the production or income of farms, assessed in this manner: At stated periods a commission is named by the Government in the several provinces to estimate the net production or income of all farms, which, after being duly corrected and revised, is printed in a large volume giving the name of every farm and owner, with the estimated income of that land and the amount of tax assessed upon that production or income.

Another tax on the list is that of transfer of real estate and mines, which is 4 per cent. on the amount of sale.

The item of "redemption of entails" will be explained further on.

According to article 37 of the constitution the laws for the collection of taxes subsist only for the term of eighteen months, and have to be renewed by Congress in due time to prevent any interruption in their collection.

Land, business, and various other taxes are collected by the treasurers in the provinces.

It may not be amiss to give here the amount of the national debt of the Republic as it was on January 1, 1887, viz:

Exterior	$34,601,270.00
Interior	49,223,429.11
Total	83,824,699.11

The exterior debt is payable in gold, principal and interest, and was consolidated during 1886, through the bankers Rothschilds in London, into 4½ per cents, with one-half per cent. sinking fund annually at 96.

The interior debt is represented in paper currency and is made up as follows:

Bonds redeemable	$6,786,825.00
Redemption of entails	16,348,688.11
Government issue of paper currency	26,087,916.00
Total	49,223,429.11

*Receipts and expenses are all given in paper currency.

Of the amount of paper currency only about $16,000,000 is in circulation, and a law has been passed for its gradual reduction and the purchasing of bullion with a view to resumption of specie payment. The depreciation of paper is from 1.90 to 2 for one dollar of gold or exchange on London.

The item "redemption of entails" (*redencion de consos*), of over $16,000,000, and which has doubled within ten years, is an unredeemable debt, and has the following origin:

Through the colonial period of this country, and since, many estates and properties were incumbered by then owners with entails; that is, an unredeemable lien of a certain sum was put upon a property, the interest of which is to be paid yearly to a church, a convent, or some beneficent institution by the holder. In order to enable owners to clear their properties from these perpetual incumbrances a law was enacted some thirty years ago by which the Government assumes the paying to the beneficiaries the amounts they may be entitled to, upon the payment to the Government of the principal or its equivalent, according to the rate of interest per annum at which it may be payable and releases the property from such liens.

By an act of Congress approved 21st June of the present year, there are now seven departments of state instead of six, as heretofore, namely: Department of the interior, department of foreign relations and worship, department of justice and public instruction, department of finance (*hacienda*), department of war, department of marine, and department of industry and public works. These are in charge of six ministers, the departments of war and marine being made one.

WILLIAM R. ROBERTS.

LEGATION OF THE UNITED STATES,
Santiago, August 31, 1888.

PERU.

REPORT OF MINISTER BUCK.

In reply to circular instruction of April 9 last, respecting inquiries therein made, I may report as follows:

FORMATION OF THE BUDGET.

The ministry of "hacienda" (treasury) is charged with forming the budget of this Republic, for which work he receives the estimates of each minister, framed by him for his own department, in which all parts of the income and expenditures should be founded upon existing laws.

The budget of the Republic is shaped for a corresponding period each two years, and should be presented by the minister of hacienda (the treasury) to Congress within fifteen days from the installment of that body, in order that it may be discussed and modified or sanctioned. Also the balance of general accounts of the republic for the biennial fiscal period antecedent should be presented by said minister.

In Congress the budget, as presented, is referred to a committee in either or both houses, and each house may, if it desires, consider and discuss the project cotemporaneously. When reference of the bud-

get is made from one house to the other (there being a senate and a house of delegates) as passed; and thereupon the other house differs upon any point or points, a joint session of both houses may be convened to reconcile differences through joint consideration and upon a joint ballot. From the house the budget, as passed, goes to the President, as in the case of all other laws, for execution.*

The revenue or income is formed from—

(1) Custom-house dues, tariffs, etc., ad valorem, fixed by law, but ratings of value are modified at certain times by the treasury after hearing a commission composed of custom employés and large exporters and importers.

(2) Real-estate taxes, which are 5 per cent. of the estimated annual rental value upon country and town lands. A fiscal officer forms the assessment list and collects the contributions or taxes.

(3) License taxes, imposed upon occupations and yearly rates of 5 per cent. of their products, appraised by commissioners formed from the same occupations or industries of each guild (*gremio.*)

(4) Tax upon movable capital, that is to say, upon actions (*acciones*), deposits, debts from the state, etc., and which is 5 per cent.

(5) Stamp duties, which is a per cent. upon all kinds of contracts, cancellation of debts, checks, etc.

(6) Taxes on mines, which is 15 soles silver semi-annually for each located mining claim of certain dimensions.

(7) Stamped paper, paper of distinct sealed value, and necessary to be used in all documents directed to public officers.

(8) Proceeds from post-offices, sales of stamps, cards, etc.

(9) *Alcabala,* or duties on inheritances and testaments.

(10) Ecclesiastical contributions upon clerical rites, such as birth registries, etc., for use of the church.

(11) Excise duties on alcohols and Peruvian brandies which may be sent to Bolivia.

(12) Bridge tolls.

(13) Right of legalizations, or charges for official certifications, etc.

(14) Patent privileges, or charges on taking out patent rights.

(15) Tax upon the consumers of tobacco (which, however, is not collected).

(16) Personal contributions, which is 4 soles silver on the coast and 2 in the interior.

Moreover, the rents from railroads (of which most were built by the state) and from the telegraph, the redemption of pensions, sales of guano (Peru's right in which is apportioned as provided in the treaty of Ancou (see Foreign Relations of 1883, pp. 731–2), sales and rents of state property, charges for coinage, etc., form an important part of the fiscal resources.

The Government can not impose contributions nor make expenditures not voted in the budget. To cover indispensable unforeseen expenses, there is made in the estimates for each department or ministry a provision under the head of "extraordinarios"—extraordinary or contingent allowance.

LOANS.

The Government can not make loans, nor compromise revenues, nor impose new contributions for payments without previous author-

* See articles 15, 16, 17, and 18 of inclosed translation of law of decentralizations, referring to departmental features of budget.

ization of Congress. But it has been a common practice in the past for the Government (which means here the executive power) to resort to extraordinary loans, through appeals to individuals, banking concerns, and merchants, for which it has given such security as it could command, in orders on the custom-houses and by hypothecating license taxes, etc. When this is done within the limit of the biennial budget provision for revenues, it seems to have been "overlooked," if not, as many seem to think, considered legally legitimate. Of course what is written must be taken as referring to constitutional and peaceful processes. Whereas under war and revolutionary conditions, which have so greatly distracted this country for years until some eighteen months ago, all sorts of process, from ostensible national loans and forced paper circulation down to barefaced confiscation and rudely imposed military exactions, which recognized no law but necessity or the will of the imposer, have been resorted to.

To the foregoing I will only add, in order that this report be as complete as seems possible under the circumstances within the intent of Department's inquiries, a reference to a pamphlet containing the law of decentralization, to which I have repeatedly referred in previous dispatches.

Besides the indicated statute, the pamphlet contains the "executive decree" in regulation of it, and various papers relative to its interpretation and enforcement; but I conceive it is only necessary to accompany this with a translation of the law itself, which I have made for inclosure.

LEGATION OF THE UNITED STATES, CHAS. W. BUCK.
Lima, Peru, June 4, 1887.

[Translation of the law of decentralization.]

The Congress of the Peruvian Republic, considering that it is necessary to regulate the administration of the fiscal rents, securing the punctual payment of the public services in each one of the departments; that it is likewise indispensable to facilitate the collection of contributions and to apply their product to the necessities of the states in which they are collected, has given the law following:

ARTICLE 1. The fiscal rents will be applied to the general and departmental payments in the form which this law indicates.

ART. 2. Rents applicable to the general payments are: The duties on importation and exportation, storage, wharfage, and other imposts of the custom-house and port; stamps, rents, and products of the national railroads; receipts of the post-offices, and, in general, all those which by this law or by those posterior to it are not destined for departmental expenses. The mole charges of the port of Puno, on Lake Titicaca, are excepted, in order that they may pertain to the municipality of the same name.

ART. 3. The rents destined for departmental expenditures are:

(1) The personal contribution (poll tax) which will be collected from all males of over twenty-one and under sixty years, which will be made effective at the rate of one sole silver each six months in the "Sierras," and two soles on the coast. The members of the regular clergy [meaning of the established Roman Church], soldiers and classes of the army, and seamen of the navy remain exempt from the payment of this tax.

(2) The tax from country and urban lands, and industrial and ecclesiastical privileges.

(3) The tax from public lighting.

(4) Judicial fines, excepting those which by existing laws belong to litigants.

(5) The inheritances which belong to the exchequer according to law.

(6) The 4 per cent. of inheritances, donations, and legacies to foreign persons, and the 2 per cent. of inheritances, donations, and legacies to collateral relations.

(7) The proceeds from sealed or stamped paper.

(8) The rental from salt works which may not be private, municipal, or charitable property, and the tax which is imposed on the salt of individuals.

(9) The products from the national property existing in each department, except the railroads and those which by special laws are reserved for other objects.

(10) The property of those convents which may be suppressed comformably to the laws.

(11) Those estrays and goods which may be without owners.

(12) The tax called excise, or which may be 2 per cent. upon the value of the transfer of landed property, whatever may be the form in which it may be collected. All laws relating to personal contributions heretofore dictated are abrogated.

ART. 4. The municipal rents will continue as they exist to-day, conformably to the law of the matter and with the application to which it appoints them, so far as not opposed to the present act.

ART. 5. The general expenses are those which are required to sustain the army, police, navy, the central officers of the executive power, which are the ministries (cabinet departments), the tribunal of accounts, the supreme court of justice, the legislative power, the public debt, the post-office department, the ecclesiastical estimates, and all the others which by law do not have the character of departmental expenses.

ART. 6. The departmental expenses are obligatory and optional. The obligatory are:

(1) The payment of the administrative services of the department and its provinces.

(2) That of the administration of justice in the first and second instances. In the judicial districts, which include several departments, the expenses which the superior court require shall be borne by all of them in proportion to the population of each.

(3) The support of primary instruction in the part where the council of the province and the district may not be able to bear it.

(4) The sustenance of the civil guard on the footing of strength which the departmental budget may determine.

(5) The expenses which the conservation and repairing of departmental roads and bridges require, being employed for such as are designated of that character in the existing law of municipalities.

(6) The expenses which the recovery of rents and the judicial defense of departmental rights may occasion.

Optional expenses are:

(1) The support of medium instruction.

(2) The instrumentalities of benevolence.

(3) The expense for the construction of roads, bridges, and other works, which may be undertaken in the department, without prejudice to those which by law are assigned to the municipal councils.

ART. 7. The expenses of the conservation and propagation of vaccine fluid, which will be made by the councils of the provincial capitals, in whose care will run this service, in the same manner in which the departmental councils have acted relative to it.

ART. 8. The treasuries (las cajas fiscales) which exist to-day will take, after the promulgation of the present law, the name of tesorerias de departamento (departmental treasuries), and they will be charged with the collection and inversion of the departmental rents (taxes). They will also collect the general rents which are commended by the general treasury (tesoreria general), carrying for those a separate account.

ART. 9. The administration and inversion of the general rents, with exception of those of the post-offices (correos), which remain in the form already established, run in charge of the general treasury (tesoreria general), which will be established in the capital of the Republic. Pending the passage of the law that organizing that treasury, the "Caja fiscal de Lima" (treasury of Lima), will perform the functions of such, and one section of it, under the inspection of the junta departamental (departmental board) will be charged with the collection and inversion of the rents of the department of Lima.

ART. 10. In order to systemize the collection and inversion of the departmental rents, so as to arrange conveniently for their better administration, there will be in each department a council, composed of the prefect, who will preside, and one delegate for each one of the provinces, who shall be elected by the provincial councils, respectively. This council will be denominated the departmental council, and the members which compose it, with the exception of the prefect, will exercise charge for four years. The first half will go out by lot in the last session of the two years, which will begin the 1st of January, 1889.

ART. 11. In those departments which consist of three provinces, the provincial council of the capital of the department will elect two delegates, and the other councils one. In those which compose two provinces, two delegates will be nominated for each one of these; in the littoral provinces four delegates will be named. Upon the realization of the election of delegates to the junta departamental (departmental board), the councils will name an alternate for each principal.

ART. 12. The departmental councils (juntas departamentals) will not be able to exercise their functions with less than an absolute majority of their numbers.

ART. 13. The office of delegate of the junta departamental (departmental board), is without pay and irrenounceable. Requisites to fulfill it are—

(1) To be in full exercise of citizenship.

(2) To be above twenty-five years.

(3) To be a native of the department to which the province pertains, or to have in it three years of residence.

(4) To be a resident in the capital of the department.

(5) To have an annual income of not under 300 soles, or to be a professor of some science.

These can not be members of the junta departamental—

(1) Those military men, or political or judicial employés in active service.

(2) Those who contract with the treasury or with any of the concejos (councils) of the department.

(3) The debtors to the fiscal or municipal funds.

(4) Those prosecuted criminally against whom has been emitted an order of imprisonment, as well as those subject to any penalty by judicial sentence.

ART. 14. The acts of the juntas departamentals are subject to Government revision, whenever any of its members, the ministry of finance, the provincial councils, or a party interested requests it. The Government will also decide contests which may arise between juntas of different departments.

ART. 15. The junta departamental will form each two years the budget of departmental revenues and expenses, and will carry them to the ministry of hacienda (the treasury), to be submitted to the approval of the chambers as a part of the general budget (junto con el presupuesto general).

ART. 16. In that budget will be included all the obligatory expenses indicated in article 6, and the overplus, if such should have been made, will be applied to those optional expenses which will be designated in the same budget (en el mismo presupuesto).

ART. 17. La Junta will be authorized, moreover, to present to Congress through the medium of the Government those reforms and reductions which they may agree to introduce in the departmental service; as also the especial measures which they may be able to devise for augumenting the rents of each department.

ART. 18. In order to suspend or retard a budget expense, or to make an extraordinary expense within the limits of the record which voted in the budget for such object, the approval of the junta departamental will be necessary, which will be evidenced in a formal act, duly signed, to that effect.

ART. 19—La junta will resolve also those complaints which the contributors (taxpayers) may formulate by reason of departmental taxes within such times as the laws indicate for the making of remonstrances.

ART. 20—The departmental administrators will render annual account of the departmental revenues and expenses, in order that they be remitted to superior tribunal (tribunal mayor) previously examined by the junta departamental.

ART. 21.—No departmental expense will be incurred which is not contained in the budget, the prefect and treasurer, in every case, and the other members of the junta when they may have authorized it, being responsible.

ART. 22.—After the promulgation of this law the treasuries and departmental juntas will be established, to exercise those functions for which they are designed. But departmental budgets (presupuesto departamental) will not be formed nor presented until the next ordinary legislature (legislatura ordinaria), the general budget in so far as approved in this legislature remaining in the interim in operation.

ART. 23.—During this time the Government will carry an account current for each department, the result of which will be placed in the knowledge of the ordinary congress (congress ordinario) which is to be installed July 28, 1887, within the first eight days of the opening of its sessions.

ART. 24.—Immediately upon the sanction of this law those orders and regulations necessary for the collection of contributions as provided, will be dictated, being arranged in all the Republic at the latest the 1st of January, 1887.

Communicate to the executive power, in order that he dispose that which is necessary to compliance herewith.

Given in the saloon of sessions of Congress in Lima the 25th of October, 1886.

F. Garcia Calderon, president of the senate; Alejandro Arenas, president of the chamber of deputies; Elias Mujica, secretary of the senate; Daniel de los Heros, secretary of the chamber of deputies.

For so much; commanded to be printed, published, and circulated, and that due compliance be given.

Given in the house of government in Lima the 13th of November, 1886.

ANDRÈS A. CÁCERES.

J. ARANIVAR.

URUGUAY.

REPORT OF MR. BACON.

"The Chambers," as they are called here, have been engaged for several days in discussing the annual budget. Much interest has been manifested in these debates. The president and the minister of finance, especially the latter, have been severely criticised, and the heated discussion has disclosed some remarkable financial propositions. The budget for the ensuing year, as prepared by the minister of finance and sent to Congress by the President, estimates the revenue at $14,700,000, and the expenditures at $13,400,000, leaving a surplus of over 10 per cent. in the treasury.

It appears, however, from the estimate itself that it is entirely hypothetical. For instance, it is stated that the revenue is made up as follows:

From customs dues	$9,000,000
From property tax	1,900,000
From other sources	3,839,000
	14,739,000

But the same revenues for 1887 amounted to only $13,044,000, as follows:

Customs dues	$7,960,000
Property tax	1,888,000
Other sources	3,196,000

From which it would appear that the custom-house is relied upon to furnish in 1888 the sum of $1,040,000 more than in 1887, the property tax $112,000 more, and other sources an increase of $643,000. In this reckoning the value of imported merchandise is placed at $35,000,000 and the dues at about $7,000,000, or an average upon all articles of something like 28 per cent., while export duties range from 6 to 8 per cent., which, upon a population of 600,000, imposes a penalty in the shape of customs dues of almost $15 per head.

The Oriental Republic, therefore, labors, perhaps, at present, under the heaviest customs tariff extant. The Argentine Republic imposes a penalty of about $13 per inhabitant, Great Britain about $3, the United States about $4.

On the contrary, the direct tax (contribucion directa) is unusually small, less than 1 per cent. upon the estimated value, in fact, upon the tax returns of land, buildings, cattle, sheep, etc., of the Republic; these returns in 1885 amounting to over $237,000,000.

The people do not understand that they are paying $15 per head for indirect taxation (customs dues), because the merchants first pay it and then add it to the price of the food sold to them, and imagine the insignificant sum, about three-fourths per cent. upon property, real and personal, is light indeed.

The estimated revenue for 1888 is to be expended as follows:

Interest on debt	$5,399,000
Army and Navy	3,190,000
Government	4,833,000

Being $370,000 over the estimate for the same in 1887.

From which it will be seen that at least 40 per cent. goes to the interest of the debt, and over $5 per inhabitant to the army, which is considerably more than in Great Britain, where the army costs more than in any other nation. Armies, in fact, are the curse of South American countries. Uruguay, for instance, with a population of less than 700,000, expends, as appears above, over $3,000,000 upon soldiers. This, however, includes pensions.

In connection with the foregoing it would be well to allude to the political condition of the Republic, and especially to its financial condition, the latter being at present most remarkable, in fact phenomnal. The country is undoubtedly in a better condition, both politically and financially, than ever before.

Politically speaking, there are two parties, the "Colorado" and the "Blanco," or the red and white. The former is now in power, and represents the ultra democracy. President Toyes and his cabinet have won the esteem and confidence of the people and imparted new life and real vigor to all the departments of the Government, insomuch that the whole Republic is more quiet and conservative than heretofore. The old Gaucho element, always restless and unconscionable, revolutionary, and unstable, has almost entirely disappeared. The negro is rarely seen, and the Indian or aboriginee lives in the past.

Their places have been filled by a good and steady stream of immigration from Spain, France, Italy, and England, and thus the country is becoming more conservative and less revolutionary every year.

Congress assembles more regularly, matters of finance are much more closely scrutinized, and all legislative and state measures carefully examined.

The Blanco party claim to be better democrats than the Colorado party, and also to represent more wealth, more culture, and more conservatism.

It is a question pretty much of the "ins and the outs." Latterly, however, there has been a schism in the Colorado party represented by some of the ablest men of the party, among others, Pasho Raminz, the late premier (Ministro de Goheino), Juan Blanco, late minister of foreign affairs, etc. This is called the constitutional party. It is not supposed that the Colorado, or Government party, will be affected by this defection, and as there is not the slightest revolutionary spark or movement, and all parties seem bent upon conservatism, the condition of the country is apparently excellent. The best evidence of this is to be found in the phenomenal financial condition of all parts of the Republic.

There never was, perhaps, so sudden a change financially in any country as in this within the short space of nine months.

In November last General Toyes was elected President. He found the debt of the Republic over $60,000,000, the annual interest thereon being over $5,000,000, the revolutionary elements varied and strong, the people outraged and dissatisfied with the long endured tyranny and rapacity of the preceding (Santos) administration, the treasury entirely empty, the finances in confusion, the Government paralyzed, and capital of all sorts fleeing the country.

To such an extent financially was the Government reduced as to be forced to borrow from individual and private banks to meet its current expenses. And yet within less than six months applications have been made by over twelve companies to establish a national

bank at Montevideo with a capital of from $10,000,000 to $20,000,000, and the successful competitor is already in operation with a capital of $10,000,000, ten times the amount required for the purpose having been subscribed. In addition to this, two other banks of $10,000,000 and $5,000,000 have been organized, and a banking society termed "La Sociedad General de Credito," with a capital of $7,500,000, is in process of organization for the purpose of advancing agriculture, commerce, immigration, etc. Moreover, several foreign companies have offered to take $20,000,000 of the state debt, at less per cent. than is now being paid thereon. In the face of all this, property of all sorts, including Government securities, has appreciated in the most wonderful manner. The real estate within the city limits, if newspaper statements and public rumors are at all reliable, has appreciated in value in the ratio of ten to one, and lands in the country have doubled and trebled in prices.

So wonderful a change financially within six months has perhaps never been recorded. Most of the capital, I am advised, has come from England and the neighboring city of Buenos Ayres. If this be true the investment will be in all probability good and permanent. When it is remembered that the population of Uruguay is not over 700,000 and the territorial area only 76,000 square miles; that neither cotton, nor tobacco, nor rice is raised, and that the flocks and herds are alone to be depended upon; that the debt amounts to over $60,000,000, and the annual interest to over $5,000,000; that a revenue of $14,700,000 is to be gathered annually, or at least for 1888; that the expenditures for the same year are estimated at $13,400,000; that over $3,000,000 is required for the army alone; that the treasury a few months ago was literally empty and the Government forced to resort to a small loan from private banks; that trade was paralyzed and the whole country exhausted by the annual drains of over $13,000,000 of revenue for several preceding years—in the face of all this and more, the unprecedented financial bound of the Government in less than six months (so remarkable as to have millions thrust upon it, even at lower rates of interest) is an anomaly in financiering, especially in South America.

It is in fact almost inexplicable. The only apparent solution consists in the wonderful recuperative powers of this remarkable fertile Republic, its immense herds of cattle, sheep, etc., and above all, to the unparalleled receipts at the custom-house and port dues, amounting annually, in this small country of a little over half a million of inhabitants, to over $8,000,000.

The general belief in the permanency and stability of the Government securities is evidenced by the offers from several foreign companies to take $20,000,000 or more thereof, at lower rates of interest than is now being paid, and the appreciation in real estate is deemed permanent; also by the quantities of money pouring in for investment from many quarters.

It does seem that the adage that capital is timid is contradicted in the Republic of Uruguay.

In addition to the banks already mentioned, there are in process of organization two others, termed, respectively, the Italian and Spanish banks, with capitals of from $5,000,000 to $10,000,000 each. They may in fact be regarded as certain, as the journals state by authority that the required capital has been subscribed. The old banks, such as the London and River Plate Bank, Brazilian, etc., with an aggregate capital of $15,000,000 to $20,0000,000 are still in

operation and do not seem to be affected by the creation of the new banks.

I am advised that the banking capital of the city is now over $60,000,000.

The sudden bound of the Republic from financial bankruptcy to financial prosperity is a matter of daily comment in the Montevideo and Buenos Ayres journals, as also in all business circles and many foreign journals, notably the English.

I can not comprehend how 10 per cent. per annum (which they say must be made in order that these banks should prosper) on aggregate capital of over $60,000,000, is to be realized from a country of less than 700,000 inhabitants, raising none of the great staples, cotton, tobacco, rice, or sugar, and whose exports and imports do not aggregate $50,000,000. Besides this, the aggregate value of real estate and stock in 1883 reached only $237,496,092, and if, as is now claimed, a fourth of that sum be added, it would be only $296,870,115.

This valuation, it is true, is very low; in fact, in several instances ridiculously so.

Cows	$5.00
Sheep	.60
Horses	8.00
Mules	6.00
Hogs	5.00
Mares	1.00

From which it will be seen that the tax upon personal property, valued as above, in order to raise what is required by the Government ($1,900,000) from the property tax, amounts to almost nothing, while the tariff imposes upon the deluded people over $15 per head.

The truth is the custom-house, yielding as it does from $7,000,000 to $8,000,000 per annum, together with the harbor and port dues, licenses, stamps, etc., which the rural population does not directly feel, constitute annually, with the exception of the $1,900,000 property tax, the estimated, indeed actual, revenue of over $13,000,000.

The farmer paying directly such an insignificant tax is happy in his ignorance of the tariff of $15 imposed upon him, and so are farmers in the United States and elsewhere.

The foregoing discloses the remarkable fact that capital is rushing into a country whose population does not exceed 700,000; who raise none of the great staples; whose commerce (exports and imports) aggregates less than $50,000,000 per annum; whose debt exceeds $60,000,000; whose annual revenue exceeds $13,000,000; where a sheep is officially valued at only 60 cents, a horse $8, and a mare only $1, and where there is already over $60,000,000 of banking capital.

That capital should still be forcing itself into the country, that bankers should be still offering to take millions of the Government securities at reduced rates of interest, and all sorts of property still appreciating in value, is indeed inexplicable to the uninitiated. It is so, however, and the shares of the national bank (created only a few months ago) are actually at from 40 to 41½ premium.

A comparison of Uruguay in this regard with other countries renders her financial condition still more striking, for while most of the bankrupt republics are begging for loans Uruguay is turning the capitalists from her doors.

I can not refrain from comparing this Republic with my native State, South Carolina. They are almost in the same latitude north

and south of the equator, have a like climate, almost the same stretch of Atlantic seaboard, a similar shape, and the Uruguay River courses the left of the country, almost identically as the Savannah does South Carolina. The flowers, fruits, vegetables, flora, and fauna are quite similar; indeed there is a striking similarity in the physical aspects of the two states.

But what would South Carolina think, though she has a third larger population, of a debt of $60,000,000 and an annual interest thereon of $5,399,000; or, in fact, the payment annually almost of her State debt?

What would be thought of the raising annually of $14,700,000 for revenue, instead of about $700,000?

What, indeed, of the said sum of $14,700,000 to maintain a government consisting of a population one-third less than her own?

What of an annual payment of $3,190,000 for an army to control less than half a million of inhabitants?

The comparison, I am aware, is not exactly a fair one, but the striking similarity physically between the two states invites it.

I am assured by all classes, however, that Uruguay is far more prosperous than at any former stage of he existence, and that her future is unusually bright and hopeful.

JOHN E. BACON,
Chargé d'Affaires.

LEGATION OF THE UNITED STATES,
Montevideo, September 15, 1887.

VENEZUELA.

REPORT OF MINISTER SCOTT.

In the formation of the annual estimates and expenditures of the Republic of Venezuela the following method is observed:

The President of Venezuela, to facilitate the formations of the estimates of Congress, presents in the last month of its session a project of estimates which, in his opinion, ought to be in force in the ensuing fiscal, or economical, year, and which he embodies in the following manner:

In view of the yield of the several branches of the national revenue in the preceding years, while taking into consideration the favorable or unfavorable circumstances that may influence its increase or decrease during the year in which the law is to rule, the President forms an estimate of the probable revenue and that of public expenditure, with regard to the disbursement in the sundry departments under the several secretaries of the Government in the current year, providing that the outlay be less than the probable estimate, so that there be always a surplus revenue to meet any unforeseen expenditure that may arise during the year.

Congress considers the project of law submitted by the President, discusses it in both houses, and approves or modifies the parts it judges proper, and after it becomes a law returns it to the President of the Republic for execution.

The national estimate of public expenditure is covered by the public revenue, which is divided into customs, inland, and states revenue.

The custom-house revenue comprises duties collected at the maritime customs houses on foreign merchandise introduced into the country, and the interest, fines, and storage the merchants may have to pay by reason of said introductions. This forms the largest part of the Republic's revenue.

Inland revenue is derived from the sale of national stamp paper; stamps for local and foreign postage, and other branches constituting the public instruction fund; of the proceeds of telegraphs and consular fees collected abroad; contributions from the territories; a third part of the duties on consumption of salt and exportations of the same, and of the one-third part of transit imports; 12½ per cent. collected on the import duties; and a tax on coffee, cocoa, indigo, cotton, and hides exported from the country forms the transit revenue.

The revenue of the states consists of two-thirds of the duties on salt and of two-thirds of the transit dues.

To cover the estimates of public expenditure the revenue is divided and distributed in the following manner, viz: Towards the expenses of the public expenditure in general, 60 per cent. of the customs and all inland revenue is allotted, less a third of the transit and a third part of the dues on salt that have another destination. The remaining 40 per cent. of the customs revenue is distributed as follows, viz: 27 per cent., inland debt (or domestic); 27 per cent., foreign debt; 13 per cent. for payment of foreign claims; 33 per cent. towards internal improvement and public works, a third part of the transit dues and a third part of the duties on salt being by law added thereto.

The national revenue appertaining to the eight states that form the Republic of Venezuela is paid monthly and in due proportion to population.

These revenues are collected by the maritime and inland customs, treasuries, intendant of finance, and other receiving officers. The customs at the several ports of the Republic pay in daily to the agents of the Caracas Bank the funds they collect, and the bank of Caracas, through its said agents, defrays throughout the Republic, with the exception of the city of Caracas, the amount of expenditures authorized by orders from the finance minister. In the capital of the Republic payments are made at the respective treasuries with funds received from the Caracas Bank, by the order of the finance minister.

The Caracas Bank charges a commission for collecting and transmitting public funds, which is stipulated in its contract with the Government, and a monthly account of the collections and payments thereof are presented to the minister of finance, and these accounts are examined at the same time with those monthly sent, showing the payments made by the maritime and inland customs and other financial agents to the agents of the Caracas Bank at the several ports.

When the Government has to meet an ordinary or extraordinary disbursement for which it has no funds in the Bank of Caracas, this institution is bound to supply the same to a certain amount, as determined by contract, and on which a stipulated interest is paid.

The customs revenue, which is the principal revenue of the Republic of Venezuela, is formed in its major part as above mentioned by

duties levied on foreign merchandise introduced into the country, and this merchandise is divided into nine classes, namely:*

(1) That which pays no duty, or is free.
(2) That which pays 10 centimes per kilogram.
(3) That which pays 25 centimes per kilogram.
(4) That which pays 75 centimes per kilogram.
(5) That which pays 1.25 bolivar † per kilogram.
(6) That which pays 2.50 bolivars per kilogram.
(7) That which pays 5 bolivars per kilogram.
(8) That which pays 10 bolivars per kilogram.
(9) That which pays 20 bolivars per kilogram.

The legislature of each state also draws up a yearly estimate, in which estimate of revenue, besides the sum that the General Government accords from the national revenue, the excise taxes are included, and from this income they pay the employés of the State, meet any other obligations in the way of expense of the public service, and employ the surplus in local improvements.

CHARLES L. SCOTT.

LEGATION OF THE UNITED STATES,
Caracas, May 14, 1887.

CHINA.

REPORT OF MINISTER DENBY.

As directed by you in your circular of April 9, 1887, I have the honor to submit the following report upon the financial administration of China:

As compared with nations which have parliaments to which budgets are submitted, the Chinese financial system is in great confusion. There is no central treasury into which the revenue of the country is gathered. There is consequently no budget. There is no redistribution from Peking of moneys received there. Each of the eighteen provinces is charged with the control of its own finances. Each province is divided into districts. The local magistrate of each district is required to transmit to the provincial authorities a certain sum of money; of the sums so received the provincial authorities are required to transmit a certain sum to Peking. In some provinces tribute-rice is also sent to Peking. The board of revenue at Peking appropriates the remainder of the collections to certain purposes in each province. The amount sent to Peking annually can not be ascertained with accuracy. It never exceeded £20,000,000. It is now supposed that about £10,000,000 are usually transmitted to Peking. This money goes to pay the thousands of Manchu's, who are supported by the Emperor, the foreign drilled Manchu soldiers, and to support the imperial household.

Large sums are contributed as gifts by the hoppos, or controllers of native customs, and by viceroys and other officials who visit Peking. There are also valuable consignments of silks, embroideries, and curios sent to the Emperor either by officials in the provinces or by manufacturers. There are certain provinces which send

* Duties levied on gross weight of package.
† A bolivar is equal to a franc.

rice; they are Kiangsi, Kiangsu, Anhui, Hupeh Hunan, Chekiang, Shantung, and Honan. The soldiers receive a large portion of their pay in grain. Besides these contributions various provinces send pewter, wax, oranges, sturgeon, grass-cloth, sandal-wood, cinnabar, tea, fruits, horses, jam, ginseng, hartshorn, fans, clocks, watches, and many other things—all for the use of the imperial household. The board of revenue appropriates each year the amount to be paid out of each particular fund for the Peking contingent and household expenses. The following will furnish an idea of these appropriations:

	Taels.
Hupeh, salt lekin	150,000
Canton, foreign customs	260,000
Chekiang, lekin	100,000
Fuhkien, tea tax	200,000
Canton, salt tax	200,000

And so on through the eighteen provinces.

Appropriations are also made to pay the Peking officials an additional salary.

I append hereto a list taken from the Red Book of 1887, showing the amount that each province is required to raise by taxation. But I am informed that the figures are not reliable, that the Red Book of 1887 is simply a republication of a publication made many years ago, and that the figures have never been revised.

The sources from which the revenue of China is derived are the following: Land taxes in money, land taxes in grain, pawn-brokers' taxes, miscellaneous taxes, salt, native customs, foreign customs, lekin.

Of the foregoing the only valuable returns published are those of the foreign customs. The annual revenue from that service in 1886 amounted to 15,144,678 taels.

It is estimated that the lekin collections amount to from 10,000,000 o 15.000,000 taels annually, exclusive of collections on account of salt and opium. There are no statistics of collections on these two articles, but the amount must be very large.

The land tax is, in the rural districts, the principal source of revenue. It ranges from 1½ cents to 10 cents a mow, or from 10 to 60 cents an acre, according to the quality of the land.

It is supposed by well-informed persons that the expenditures of the Chinese Government exceed its revenue. The deficiency is made up by contributions from officials.

The debt of China is small. She has of late made several small loans of various foreign banking and commercial establishments. The collections of the foreign customs service are hypothecated for the payment of these loans. The money so borrowed has been used in erecting coast defenses, purchasing vessels of war, and in paying troops. Her loans have hitherto been paid at maturity. A list of loans is hereto annexed.

I am well aware that the foregoing report is incomplete, but there are several circumstances which make it nearly impossible to furnish such information as to China as may be procured in European nations. Under the Chinese Government each province raises and disburses its own revenue, sending only a certain defined sum to Peking. This revenue is not fixed by law, but by the will of the provincial authorities.

There are no publications of receipts and expenditures as in other countries, no estimates, no appropriation bills. There is no responsibility on the part of the Government to any body of men. It seems to be well understood that any surplus collected by the hoppos and provincial treasurers belong to them, with the condition annexed that they shall contribute large sums to the Peking authorities. Hence there are no reports of either levies or collections in the provinces.

The Imperial Government makes no levy, has no budget, but simply appropriates certain sums out of certain collections as herein explained. A philosophical mind might make an ingenious comparison between this system and our own, but such disquistion is not in response to the circular.

List taken from Red Book showing amount of taxation due from each province.

Shingking:		
Land revenue	taels..	38,706
Grain	peculs..	58,583
Grain retained for Manchu troops	do....	53,091
Chihli:		
Land revenues collected from metropolitan prefectures	taels..	154,780
Land revenues collected from other prefectures	do....	1,884,470
Pawn-brokers' taxes, etc	do....	32,570
Miscellaneous	do....	41,980
Salt department and gabel	do....	437,949
Native customs	do....	82,800
Kiangsu:		
Land revenues	taels..	8,116,826
Pawn tax	do....	46,930
Taxes on reed lands along banks of rivers	do....	93,940
Miscellaneous	do....	25,492
Grain, including amount from province of Anhui	peculs..	1,421,273
Anhui:		
Land revenues	taels..	1,718,824
Pawn-brokers' taxes	do....	28,384
Taxes on reed lands along banks of rivers	do....	28,584
Miscellaneous	do....	46,611
Salt department and gabel	do....	2,085,282
Native customs	do....	799,468
Kiangsi:		
Land revenues	taels..	1,878,682
Pawn-brokers, etc	do	4,470
Salt department and gabel	do....	5,150
Miscellaneous	do....	34,123
Native customs	do....	220,322
Grain	peculs..	795,063
Chekiang:		
Land revenue	taels..	2,914,946
Pawn-brokers' tax, etc	do....	10,650
Salt department and gabel	do....	502,340
Miscellaneous	do....	38,437
Native customs	do....	167,190
Grain	peculs..	677,726
Fuhkien:		
Land revenue	taels..	1,074,490
Salt department and gabel	do....	85,470
Pawn-brokers' tax, etc	do....	24,850
Miscellaneous	do....	27,780
Native customs	do....	73,550
Hupeh:		
Land revenue	taels..	1,174,110
Pawn-brokers' tax, etc	do....	58,780
Miscellaneous	do....	22,540
[illegible]ive customs	do....	9,644
[illegible]	peculs..	96,924

List taken from Red Book showing amount of taxation, etc.—Continued.

Hunan:		
Land revenue	taels..	883,745
Pawn-brokers' tax, etc	do....	30,530
Miscellaneous	do....	14,813
Grain	peculs..	96,214
Honan:		
Land revenue	taels..	3,164,758
Pawnbrokers' taxes, etc	do...	12,650
Miscellaneous	do...	32,030
Grain	piculs..	221,342
Shantung:		
Land revenue	taels..	3,376,165
Salt department and gabel	do...	120,720
Pawnbrokers' taxes, etc	do...	47,850
Miscellaneous	do...	22,711
Native customs	do...	29,680
Grain	piculs..	253,963
Shansi:		
Land revenues	taels..	2,990,675
Pawnbrokers' taxes, etc	do...	31,100
Salt department and gabel	do...	507,028
Native customs	do...	62,763
Shensi:		
Land revenue	taels..	1,658,700
Miscellaneous	do...	40,123
Kansuh:		
Land revenues	taels..	280,652
Pawnbrokers' taxes, etc	do...	89,450
Miscellaneous	do...	60,780
Grain	piculs..	218,550
Szechuen:		
Land revenue	taels..	632,094
Miscellaneous	do...	20,520
Native customs	do...	11,284
Kwangtung:		
Land revenue	taels..	1,264,804
Pawnbroker's tax, etc	do...	5,690
Miscellaneous	do...	59,530
Salt department and gabel	do...	47,910
Native customs	do...	97,520
Kwangsi:		
Land revenue	taels..	416,399
Pawnbroker's tax, etc	do...	25,880
Salt department and gabel	do...	47,150
Native customs	do...	26,780
Yunnan:		
Land tax	taels..	209,582
Miscellaneous	do...	84,256
Rice and bran	piculs..	295,662
Kweichou:		
Land revenue	taels..	101,268
Pawnbroker's tax, etc	do...	13,690
Miscellaneous	do...	13,742
Salt department and gabel	do...	6,234

CHARLES DENBY.

LEGATION OF THE UNITED STATES,
Peking, June 10, 1887.

[Inclosure 1.]

CHINESE GOVERNMENT LOANS.

Late German newspapers, both financial and political, are jubilant at the latest victory of German enterprise in successfully negotiating the 5½ per cent. Chinese loan. The transaction is pictured as a direct blow at England's prestige as the

bank and stock exchange of the world. This loan is represented as the ninth which China has contracted since 1874. They are as follows:

Year.	Per cent.	Amount.
1874	8	627,615 pounds sterling.
1877	8	1,604,276 pounds sterling.
1878	8	1,989,500 taels.
1881	8	4,400,000 taels.
1884	8	2,000,000 taels.
1884	7	5,000,000 taels.
1885	6	1,500,000 pounds sterling.
1885	.....	1,394,700 dollars.

The above loans, with the exception of the one of 1885, over $1,394,700, and which was negotiated with the chartered bank of India, Australia, and China, were, we believe, contracted with the Hong-Kong and Shanghai banking corporation.

SECOND REPORT OF MINISTER DENBY.

There is no budget in China. I inclose translations of two memorials from the board of revenue. One provides funds for the furnishing of supplies to the Imperial household; the other is a species of Imperial budget. It assesses on various sources of revenue contributions for Imperial requirements. This is the first time, as far as I know, that such a document has been published. It indicates that China intends, by degrees, to centralize the levy of taxation—a crying need.

In finances, China may be considered to be in the condition that the United States were prior to the adoption of the Federal Constitution.

A direct assessment on various items of revenue and the publication thereof may be regarded as the initiation of regulations which may lead to the adoption of a budget, as understood in other countries.

"OPENING OF THE SEALS."

The phrase "opening of the seals," used in the second inclosure, means when the the official seals are brought again into use after the new-year holidays. The seals are put away from about the 20th of the 12th moon to about the 20th of the first moon, Chinese calendar, but to prevent delay of business, blank forms are prepared, *i. e.*, sealed for use during the new-year vacation.

CHARLES DENBY.

LEGATION OF THE UNITED STATES,
Peking, September 21, 1887.

[From the Chinese Times.]

SEPTEMBER 10, 1887.

A MEMORIAL ON IMPERIAL HOUSEHOLD FINANCE.

A postscript memorial from the board of revenue for providing special funds for the use of the imperial household.

Some years ago it was decided, with the sanction of the throne, to increase the funds annually appropriated for the use of the imperial household. During 1866 and 1867 an additional amount of 300,000 taels was each year allowed, and later on,

on account of the increased expenditures of the imperial household, it was again decided to augment the appropriations for the use of the imperial family. Accordingly, beginning from the year 1868, the memorialists laid aside a supplementary amount of 300,000 taels, making in all a total additional subsidy of 600,000 taels per annum. The memorialists are well aware that the revenue and taxes yearly remitted to the capital by the provinces are limited, and on account of the demands of national expenditure being daily on the increase the funds in hand are really insufficient to meet the present requirements. But they also bear in mind that the sum decided to be appropriated is to meet the urgent uses of the imperial household, and for this very reason it behooves them to devise plans for its provision, as they have done heretofore. They have therefore prepared a schedule of the different allotments to be contributed from various sources, and this they will append later on. They pray that his imperial majesty may direct by decree the viceroys, governors, financial commissioners, salt commissioners, customs superintendents, generalissimos, and all concerned, to forward in successive installments, during the ensuing year, their respective apportionments. That they be instructed to notify beforehand the board of revenue the date when the remittances are forwarded, and that the first half of their shares be sent in within six months from date of opening seal next year, and the balance during the following 12th moon. The list of apportionments is respectfully appended:

	Taels.
Liang Wai, salt gabelle	120,000
Chêkiang, salt gabelle	50,000
Canton, salt gabelle	50,000
Hupeh, salt likin offices	50,000
Fukien, tea duty	50,000
Huai An, customs revenue	30,000
Fukien, customs revenue	100,000
Kiukiang, customs revenue	150,000
Total	600,000

A MEMORIAL ON FINANCE.

A memorial from the board of revenue submitting certain proposed measures for supplies for the ensuing year.

The memorialists beg to submit that in former years two special appropriations were annually made from the revenue and taxes forwarded to Peking, the first one in the winter, and the second in the following spring. During the year 1886 an appropriation of 7,000,000 taels was made, and later on, in the spring of 1887, there was a supplementary appropriation of 1,000,000 taels, making the total sum thus appropriated 8,000,000 taels. The time having arrived when special funds must be provided for the present year, the memorialists in joint deliberation have decided to conform to the precedent followed in the year 1886, when the winter appropriation of 7,000,000 taels was levied from the different provinces, the amount allotted to each province being based upon their financial condition. They have drawn up a schedule of the different allotments for the inspection of His Imperial Majesty, praying that he will direct by decree the various viceroys, governors, generals in charge of customs, superintendent of the salt gabelle, financial commissioners, customs superintendents, and all those concerned, to remit the different amounts apportioned them in the ensuing year, when the seals are opened. That the first half of their appointments be remitted within five months after the opening of the seals and the balance during the first part of the following twelfth moon. And if the contributions be not promptly forwarded, and in full, that the delinquent be impeached in accordance with existing regulations. The list of assessments on the various provinces for securing special funds for the year 1887 are appended below:

	Taels.
Shansi, land taxes	450,000
Shantung, land taxes	400,000
Chêkiang, land taxes	400,000
Hupeh, land taxes	450,000
Hunan, land taxes	200,000
Honan, land taxes	200,000
Anhui, land taxes	200,000
Kiangsi, land taxes	350,000
Kiangsu, land taxes	150,000
Kuangtung, land taxes	100,000

	Taels.
Fuhkien, land taxes	200,000
Chihli, salt gabelle	250,000
Kiangsu, salt gabelle	250,000
Chêkiang, salt gabelle	220,000
Canton, salt gabelle	200,000
Shantung, salt gabelle	140,000
Shantung, increased price on salt	70,000
Fuhkien, salt gabelle	150,000
Hupeh, salt likin	100,000
Hunan, salt likin	50,000
Szechnen, salt likin	150,000
Szechnen, subsidy from taxes	120,000
Fuhkien, tea duty	200,000
Canton, I. M. customs revenue	100,000
Canton, surplus funds	60,000
Fuhkien, I. M. customs revenue	200,000
Kiukiang, I. M. customs revenue	100,000
Chêkiang, inland customs revenue	40,000
Chêkiang, maritime customs revenue	100,000
Kiangsu, customs revenue	150,000
Hankow, revenue	150,000
Taiping, inland customs revenue	150,000
Tientsin, inland customs revenue	40,000
Chefoo, maritime customs	50,000
Chinkiang, maritime customs	60,000
Kiangsi, inland, maritime customs	30,000
Yangchow, maritime customs	30,000
Wuhu, maritime customs	30,000
Feng Yang, maritime customs	30,000
Anhui, maritime customs	60,000
Kiangsi, likin income	100,000
Kiangsu, likin income	100,000
Chêkiang, likin income	100,000
Kuangtung, likin income	100,000
Hupeh, likin income	120,000
Hunan, likin income	50,000
Anhui, likin income	50,000
Total	7,000,000

JAPAN.

REPORT OF MINISTER HUBBARD.

[NOTE.—The bulk of this information has been furnished, in answer to my inquiries, by the minister of finances, and this information has been translated from the Japanese text by Dr. W. N. Whitney, interpreter of this legation. The printed portion is the published imperial ordinance touching the budget for the 20th year of Meiji (1887–'88).]

THE ANNUAL BUDGET.

In Japan the annual expenditure and the amount of revenue to meet it are fixed by the Government by one and the same imperial ordinance, called the "annual budget."

The order of framing the budget is chiefly in accordance with the "regulations for estimation," issued in March, 1885, but since the alteration in the official organization of the Government, in February, 1886, some change in the rules, too, have taken place, of which the following is a summary up to the present time:

ORDER OF FRAMING THE ANNUAL BUDGET.

The head of each department, in accordance with the regulations for estimation, gives an order to the divisions and bureaus under him to frame minute estimates of the expense with due regard to economy. Collecting these estimates and arranging them into sections, chapters, articles, and subarticles, he forms the annual budget of the department and transmits it to the minister of finance, together with the detailed estimates of each office, before the 30th of June of the fiscal year previous. The minister of finance then examines these estimates from each department, and after comparing the estimates of expenditures with those of the revenue he arranges them into sections and chapters, and thus forms the annual budget of the imperial treasury, which he submits to the cabinet before the 20th of December of the fiscal year previous to the year for which the estimates are made, subjoining the budget of each departmental chief. In the cabinet this budget of the minister of finance is considered and examined, and after the decision of His Majesty the Emperor has been given the amount fixed is notified by an imperial ordinance before the 3d of March of the previous fiscal year. The fiscal year begins with April 1.

ESTIMATES OF REVENUE.

The revenue is divided into three classes, viz: (1) tax; (2) income other than tax, *i. e.*, income from forests and woods, profit from official works, income from telegraphs and posts, various fees, and other miscellaneous income; (3) contingent debts and the money remaining over from the previous year.

The process of estimating the amount is according to the following standards:

(1) Among revenues of the first class the amount of property and the number of licenses are estimated according to the actual amount or number at the end of the second fiscal year before.

(2) Customs, stamp duty, and income tax in class one, and the revenue of the second class are estimated according to the average of the actual revenue of three years previous to the second fiscal year before.

(3) In the first class, what are collected according to number, are estimated according to their average number and price or value for the second fiscal year before.

(4) The revenues of the third class is determined contingently according to the financial condition at the time.

Heretofore, when the estimated revenue is found to be deficient, compared with the expenditure, the expenditure is to be kept within legitimate limits, so as to preserve the equilibrium between the revenue and expenditure. Hence, unless there were no large or extensive building undertaken or other work commenced, the ordinary expenditure was met by the ordinary revenue, and it never became necessary to raise a fund or provide other means of meeting the necessary yearly expenditure. Of late years, however, the treasury department has occasionally issued bonds and certificates. This is only to meet the deficiency occurring within the year and does not extend over to the next year.

PROPORTION OF TAXES.

The revenue of Japan is almost wholly derived from taxation. If the revenues of the first class, those taxes of the second class which are included among common taxes in European countries, license fees, and income from telegraphs and posts, be added together and compared with the total amount of revenue, they include more than eight-tenths, while the income from forests and profits from official works are comparatively of small amount. Again, in the first class the principal tax is upon land, which produces two-thirds; the next is on spirits, equal to one-fifth; and the taxes on soy (a kind of sauce) and tobacco come next. As to the taxes upon occupations and for licenses, they do not amount to more than 1,000,000 yen. A table showing the rate of taxation as embraced within the first class of revenue and the share of each tax is appended.

CLASSIFICATION OF EXPENDITURE AND ITS ESTIMATION.

Since the fiscal year of 1886 the expenditure has been divided into four classes, viz: (1) national debts, pensions, and various hereditary pensions; (2) expenses of the royal family and temples; (3) ordinary expenses of government business; (4) contingent expenses.

In each class the expenses are divided into sections, according to the character of business, and under each section they are divided into chapters* and articles and subarticles, according to the character of the expenditure.

The expenditure, classed under sections and chapters, are included in the imperial ordinance, while those under articles and subarticles are not, as they are divisions used in the estimates of the departments only. The expenditures enumerated in the sections can not be diverted one to another, but those included in chapters may, by consent of the minister of finance previously obtained. This is permissible, because the expenditure enumerated under chapters is of the same character, while that in sections is for objects entirely different. For example, expenses of a department proper come under sections, while salaries and the expenses of officers, and those of traveling and repairing come under chapters.

To estimate the expenditure the following standards are to be followed:

In class I the amount of the national debt to be repaid (except that payable at a fixed time) is estimated in accordance with the financial condition of the country, and its interest according to the fixed rate. In classes I, II, III, and IV the sums payable to officers, and which may be anticipated, such as pensions, salaries, and other wages, are estimated according to the actual number of pensions or matters [as pensions, salaries, etc.—TR.] on the 1st of April of the previous year, according to the fixed number, if it be fixed. In classes I, III, and IV the sums payable to officers, or other expenses which can not be anticipated, such as traveling expenses, cost of things given as presents, expenses of offices, and repairing, are estimated according to the amount of actual expenditure of the three years previous to the second year before the year for which the estimate is made.

In class III sums payable to military men belonging to a company or ship of war are estimated according to the fixed number (of

* Or parts.

men). In classes III and IV sums payable for construction which may be anticipated, such as expenses of works, of contingent construction, and for the purchase of ships of war, are determined in accordance with the estimates received (accepted) for such work. In case the work is not finished within the year, the total amount is to be divided according to the length of time it will require, and the proportion for the year only included in the estimate.

Although the above are the general standards for estimating expenditures, the expenditure may be either increased or diminished, according to the amount of revenue and pressing nature of the work.

RESERVE FUND AND INCREASE OF EXPENDITURE.

As a rule the expenditure can not be increased after the estimated amount is fixed. But if some contingent extraordinary affair or unavoidable event occurs, its expenses must be provided for. One section is provided for the reserve fund of the national treasury, which fund is committed to the care of the minister of finance. This section is again divided into two chapters. The first embraces special expense of contingent extraordinary affairs; the second, deficiencies occurring in the amount of annuities and pensions arising from the nature of regulations, and which therefore can not be avoided. Whenever such additional amount is required in any department, the head of that department must make a statement thereof with full reasons for it, and accompany the same with further statement of details to the minister of finance, with whom he must consult. If the latter, upon examination, considers the expenditure necessary, he approves it; but if, on the contrary, he does not, it must then be presented to the cabinet for the consideration of that body. During any fiscal year, if the estimated amount of the reserve fund is found to be deficient, the minister of finance must devise some means of meeting it, and present the plan as a motion before the cabinet, and then obtain the decision of His Majesty the Emperor.

DISBURSEMENTS.

The disbursements in cash are under the control of the minister of finance and are actually performed through the subtreasuries in different parts of the country. With the exception of the expenses of offices abroad, marching expenses of the army, expenses of navigation in the navy and of ships for inspecting light-houses, expenses of secret service, expenses of those offices which are located on islands where there is no convenient means of communication, or in a place where there is no treasury branch office, money is never delivered to any office. When the annual expenditure is fixed the disbursing or accounting officer of each office must estimate the monthly amount of disbursements, and, making a statement of details, send the same to the minister of finance within fifteen days after the reception of the notification. Having obtained the minister's approval, whenever the disbursement is actually required, he gives an order to the principal accounting officer of the finance department to issue an order for payment addressed to a branch treasury office in the neighborhood. The holder of the order for payment should present this order at the fixed branch treasury and receive the money therefor within ninety days from the time issued. The disbursing officer of each office (de-

partment) then makes a report of the payments of the month and sends the same to the minister of finance by the 7th of the following month, which the minister examines by comparing with the report sent from each branch treasury office. The object of this is to distinguish between the one drawing the order and the one to whom the cash is paid, as far as possible, in order to prevent mistake or fraud. The movement of the expenditure and revenue of each fiscal year begins with April 1, but whenever it is necessary from the requirements of the regulations, or where there is no branch treasury, it is allowed to make payment after December 1 of the previous fiscal year. Again, when the expenditure of any office is not all disbursed within a fiscal year disbursement may be continued until the 31st of the ensuing year, as a matter of convenience.

At the treasury payments may be made until the 30th of November of the following year, in order to close the financial matters of each year. As to the details of the order of payment, see regulations of March, 1886, herewith, on separate sheet.

SETTLEMENTS.

According to the financial regulations of January, 1882, the principal accounting officer of each office must make a statement of the revenue and expenditure of each financial (or fiscal) year, and submit the same for approval to chamber (or board) of audits, with verifications, before the 31st of January of the next fiscal year. The chamber of audit then examines these statements from each office, and if found to be correct gives its approval before January of the second year after.

The head of each department makes a report of the settlement of accounts of each financial year, and transmits it to the minister of finance, leaving the department before the end of February of the second year after. The minister of finance then makes a general report of the revenue and expenditureof the national treasury for each financial year, and submits it, together with that sent from each department, to the cabinet.

The cabinet then gives them to the chamber of audit to audit and make its notification through an Imperial ordinance after receiving the decision (approval) of His Majesty, which process thereby relieves the minister of finance and the heads of the several departments from responsibility in regard to the financial estimates.

CONCLUSION.

The process of framing the estimates of the annual budget of Japan, and the order of carrying it out in practice down to the final settlement, are nearly as above stated. The disturbances consequent upon the restoration (1867) were hardly settled when the civil war of 1876 broke out, so that it has only been within a few years that we have been able to make any investigation as to whether the present system is advantageous or not. In the present system there will be found parts that are insufficient, and some processes contradictory to the regulations, and which can not be avoided from the present condition of affairs. Now the national assembly is soon to be opened, it becomes imperative that the financial system of the country should be established and its regulations fixed. A complete system of

finance administration is therefore being arranged which, it is hoped, soon will be put into practice. The brevity of the above description is due, therefore, to this reason, that the hereinbefore-mentioned regulations are only of a temporary nature. In order to show the financial conditions of the country the annual budget for 1887, with a detailed statement, is herewith appended.

RICHARD B. HUBBARD.

UNITED STATES LEGATION,
Tokio, October 28, 1887.

Taxes of the first class of revenue.

Name of tax.	Rate and character.
Land tax	0.25 of fixed value of the land.
Income tax	Above en, 30,000=.08 of income. Above en, 20,000=0.25 of income. Above en, 10,000=.02 of income. Above en, 1,000=0.15 of income. Above en, 300=.01 of income. NOTE.—This tax was imposed by act of March, 1887, to go into effect from July, and hence was not mentioned in the budget for 1887.
Tax on national banks	.007 on amount of bank-note issue.
Stamps used in deeds, bonds, etc.	There are eleven varieties, from en 1 to en 0.005, which are affixed to deeds and bonds, etc., according to amount and character.
Stamps used in lawsuits	There are nine varieties, from en 0.08 to en 20, and are to be affixed to documents according to amounts involved and character of civil suits.
Tax on productions of Hakkaido.	En 0.05 of the price value of marine products.
Tax on rice exchanges	En 0.002 of the contract price of rice bought and sold; en 0.0008 of the contract price of Government bonds bought and sold on time; en 0.0006 of the contract price of Government bonds bought and sold on time on various other stocks.
Tax on spirits (saké—rice beer).	License on each manufactory, en 30; tax on amount in three classes, en 6, 3, and 4 on 1 koku (39.700 imp. gal.), according to kind; license of manufactory for self-consumption, en 0.80.
Tax on barm (yeast)	En 50 for each manufactory.
Tax on soy	En 5 on each manufactory; tax on amount en 1 per koku.
Tax on confectionery	Tax, confectionary, on manufactory in 0.05 of amount of sales when it is above en 30 per six months; license of occupation, en 20. License for laying in quantity to sell, en 10; license for peddling, en 10; tax on occupation of manufacturing, wholesale and retail, vary according to the number of employés.
Tax on tobacco	Tax on manufactory, en 15; tax on broker, en 15; tax on retailer, en 5; license for occupation, en 0.20; license for purchasing and laying in goods in quantity, en 0.10; license for peddling, en 0.10. NOTE.—There are also eighteen varieties of tobacco stamps, which are affixed according to price and weight.
Tax on patent medicine	Tax on occupation for each kind of medicine sold, en 2; license for occupation, en 0.20. NOTE.—There are ten varieties of stamps, from en 0.10 to en 0.001, which are to be affixed according to the fixed retail price of the article.
Tax on steam and sailing vessels, etc.	On steam-boats, en 15 for every 100 tons; on sailing vessels of foreign style, per 100 tons, en 10; ons ailing vessels, Japanese style, for every 100 koku, en 2 if they have capacity of carrying above 50 koku; if less than 50 koku and up to 18 feet in length, en 0.30; above 18 feet per 6 feet, en 15 additional; on pleasure boats up to 18 feet in length, en 0.50 above, 0.25 per ken.
Tax on vehicles	On carriages there are three kinds or classes, taxed fromen 1 to 3 jinrikisha (carriages drawn by men), 2 classes, en 1 and 2; ox carts, en 1; goods carts, according to size, en 0.50 to 1.
Tax on weights and measures	0.01 of original price.
License to buy and sell horses and oxen (cattle).	For each head, en 1.
License to hunt (shoot)	For those who follow it as an occupation, en 1; for pleasure, en 10.
Customs duties	Ad valorem; specific.

[The Japan Daily Mail.]

IMPERIAL ORDINANCE NO. 8.—FINANCIAL ESTIMATES FOR THE TWENTIETH FISCAL YEAR OF MEIJI (1887-1888).

REVENUE.

Part 1.

	Yen.	
ART. I. Internal revenue:		
1. Land tax	42,559,441.000	
2. Tax on national banks	221,850.000	
3. Stamp duties	654,821.000	
4. Stamps to be used in judicial proceedings	398,702.000	
5. Tax on marine products of the Hokkaido	200,000.000	
6. Tax on rice exchanges	264,824.000	
7. Tax on stock exchanges	49,320.000	
8. Tax on saké brewing	13,697,723.000	
9. Tax on kôji dealers	27,810.000	
10. Tax on shôyu	1,273,210.000	
11. Tax on confectionery	543,925.000	
12. Tax on tobacco	1,244,002.000	
13. Tax on drugs	415,216.000	
14. Tax on ships	241,037.000	
15. Tax on vehicles	485,305.000	
16. Tax on weights and measures	1,658.000	
17. Horse and cattle dealers' licenses	67,141.000	
18. Shooting licenses	51,585.000	
		62,397,570.000
ART. II.—Customs duties		2,704,553.000
Total		65,102,123.000

Part 2.

ART. I.—Licenses and fees:		
1. Licenses	26,582.000	
2. Fees	2,343,601.000	
		2,370,183.000
ART. II.—Postal and telegraphic receipts:		
1. Receipts from post-offices	2,233,488.000	
2. Receipts from telegraphs	863,209.000	
		3,096,697.000
ART. III.—Revenue from forests:		
1. Rents	13,018.000	
2. Sales	397,164.000	
3. Miscellaneous receipts	6,601.000	
		416,783.000
ART. IV.—Rents and sales of Government property:		
1. Rents	222,805.000	
2. Sales	83,541.000	
		306,346.000
ART. V.—Repayment of Government advances		411,718.000
ART. VI.—Miscellaneous receipts:		
1. Rents of mines	18,205.000	
2. Sales of the official gazette	177,540.000	
3. Fines and forfeitures	347,963.000	
4. Indemnities	9,620.000	
5. Sundry receipts	374,309.000	
		927,637.000
ART. VII.—Receipts from Government industries:		
1. Profits on Government industries	795,303.000	
2. Receipts from Government industries	23,840.000	
		819,143.000
Total		8,348,507.000

Part 8.

ART. I.—Sales of navy loan bonds		6,486,240.000
Grand total of revenue		79,936,870.000

EXPENDITURE.

Part 1.

	Yen.	
ART. I.—National debt:		
1. Amortisement of public loans	3,614,016.000	
2. Interest on public loans	15,720,668.000	
3. Commissions	74,408.000	
4. Exchequer bills	590,812.000	
5. Temporary advances	96.000	
		20,000,000.000
ART. II.—Annuities for meritorious services:		
1. Annuities for life	141,570.000	
2. Annuities, limited	2,500.000	
		144,070.000
ART. III.—Pensions:		
1. Civil pensions	44,614.911	
2. Army pensions	162,554.288	
3. Navy pensions	11,104.884	
		218,273.983
ART. IV.—Allowances:		
1. Allowances of the shizoku and kazoku of the Okinawa prefecture	152,576.000	
2. Allowances to the temples of the Okinawa prefecture	2,718.000	
3. Allowances to the shrines of the Okinawa prefecture	1,415.000	
		156,709.000
ART. V.—Salaries of officers not in actual service:		
1. Chiokunin	3,667.000	
2. Sohnin	118,318.000	
3. Hannin	244,556.000	
		366,541.000
Total		20,885,593.983

Part 2.

ART. I.—Expenses of the imperial household		2,500,000.000
ART. II.—Expenditures for shrines:		
1. Expenses for the jingū	16,693.000	
2. Repairs of the jingū	790.000	
3. Expenses for the national military cemetery	2,673.000	
4. Repairs of the national military cemetery	8,506.250	
5. Expenses for annual festivals of national temples	1,765.000	
6. Preservation fund for governmental temples	96,342.000	
7. Preservation fund for national temples	69,994.000	
8. Supplementary fund for shrines	47,598.000	
9. Contribution to yasukuni jinsha	7,550.000	
		251,911.250
Total		2,751,911.250

Part 3.

EXPENDITURES IN THE CABINET.

	Yen.	
ART. I.—The cabinet:		
1. Salaries and allowances	262,631.000	
2. Office expenses	55,719.000	
3. Traveling expenses	6,425.000	
4. Printing expenses	148,568.000	
5. Rewards	22,668.000	
6. Repairs and constructions	9,125.000	
7. Confidential service expenses	100,000.000	
		605,136.000

EXPENDITURES IN THE DEPARTMENT OF STATE FOR FOREIGN AFFAIRS.

ART. I.—The department proper:		
1. Salaries and allowances	136,295.000	
2. Office expenses	37,710.000	
3. Traveling expenses	6,997.000	
4. Expenses for entertainments	4,200.000	
5. Repairs and constructions	4,000.000	
		189,202.000
ART. II.—Legations and consulates abroad:		
1. Salaries and allowances	431,197.000	
2. Office expenses	92,426.000	
3. Expenses for entertainments	9,200.000	
4. Traveling expenses	52,487.000	
5. Expenses for trials and prisoners	1,195.000	
6. Expenses for students abroad	13,480.000	
7. Confidential service expenses	44,000.000	
8. Funds for the relief of distressed subjects abroad	2,000.000	
9. Repairs and construction	5,000.000	
		650,985.000
Total for the department of state for foreign affairs		840,187.000

EXPENDITURES IN THE DEPARTMENT OF STATE FOR HOME AFFAIRS.

ART. I.—The department proper:		
1. Salaries and allowances	286,784.000	
2. Office expenses	83,798.000	
3. Traveling expenses	80,645.000	
4. Repairs and constructions	12,414.000	
5. Penitentiaries	461,063.000	
6. Expenses for the police training-school	15,000.000	
		889,704.000
ART. II.—Expenditures for engineering works:		
1. Expenses for district officers in charge of engineering works	200,000.000	
2. Repairs to the bank of the Tone River	110,500.000	
3. Repairs to the banks of the Fuji River	42,350.000	
4. Repairs to the banks of the Tenru River	42,500.000	
5. Repairs to the banks of the Oi River	1,000.000	
6. Repairs to the banks of the Kitakami River	84,921.000	
7. Rpairs to the banks of the Mogami River	34,000.000	
8. Repairs of the banks of the Okuma River	530.000	
9. Repairs to the banks of the Shinano River	127,323.000	
10. Repairs to the banks of the Agano River	500.000	
11. Repairs to the banks of the Sho River	680.000	
12. Repairs to the banks of the Yodo River	109,624.000	
13. Repairs to the banks of the Kiso River	236,572.000	
14. Repairs to the banks of the Yoshino River	25,500.000	
15. Repairs to the banks of the Chikugo River	34,000.000	
16. Supplementary expenses for local engineering works	450,000.000	
		1,500,000.000

	Yen.	
ART. III.—Supplementary expenses:		
1. For repairs and constructions	116,533.000	
2. For local meteorological observatories	4,500.000	
3. For the preservation of old temples	10,000.000	
		131,033.000
ART. IV.—Central police board:		
1. Salaries and allowances	297,624.000	
2. Office expenses	34,256.000	
3. Expenses for horses	600.000	
4. Confidential service expenses	3,800.000	
5. Rewards	200.000	
6. Traveling expenses	4,662.000	
7. Repairs and constructions	5,779.000	
8. Expenses for the policing of the foreign settlement in Tokyo	3,391.000	
9. Police expenses for the seven islands of Idzu	1,580.000	
10. Expenses of the police guards of the ministers of state	42,148.000	
		394,040.000
ART. V.—Expenses of cities and prefectures:		
1. Salaries and allowances	2,879,229.000	
2. Office expenses	361,294.000	
3. Traveling expenses	704,506.000	
4. Rewards and relief	115,304.000	
5. Expenses for wrecked vessels and seamen	2,049.000	
6. Expenses for boats	693.000	
7. Police expenses	1,239,029.000	
8. Expenses for the policing of the foreign settlements	81,769.000	
9. Expenses for repairs and constructions	137,248.000	
10. Expenses for the construction of the Yokohama water-works	250,000.000	
11. Compensation for damages caused to the rice crop by the new canal in the Niigata prefecture	3,045.000	
12. Expenses and aid to indigent Shizoku to establish industries for their maintenance	5,751.000	
13. Local expenses in the Ogasawara Islands	10,455.000	
14. Local expenses in the Okinawa prefecture	192,587.000	
15. Local police expenses in Tsushima	8,149.000	
16. Local police expenses in Oshima	8,238.000	
		5,999,346.000
Total for the department of state for home affairs		8,914,128.000

EXPENDITURES IN THE DEPARTMENT OF STATE FOR FINANCE.

ART. I.—The department proper:		
1. Salaries and allowances	417,388.000	
2. Office expenses	156,651.000	
3. Expenses incurred in the handling of coin	529,216.000	
4. Traveling expenses	76,962.000	
5. Expenses for manufacturing stamps (for promissory notes and for receipts of sums of money) and for receiving back the same	169,052.000	
6. Expenses for the issuing of the navy loan bonds	23,379.000	
7. Repairs and constructions	19,500.000	
		1,392,148.000
ART. II.—Custom-houses expenses:		
1. Salaries and allowances	148,914.000	
2. Office expenses	31,000.000	
3. Expenses for boats	4,102.000	

	Yen.	
ART II.—Custom-houses expenses—Continued.		
4. Traveling expenses	5,187.000	
5. Repairs and constructions	7,590.000	
6. Amount for articles of an ad valorem duty, taken over	2,050.000	
		198,848.000
ART. III.—Expenses for the collection of internal taxes:		
1. Salaries and allowances	817,048.000	
2. Office expenses	127,532.000	
3. Expenses connected with the receipt of land taxes in rice	2,875.000	
4. Expenses relating to stamps and licenses	80,775.000	
5. Traveling expenses	759,403.000	
		1,787,633.000
ART. IV.—Fund for re-imbursements and losses:		
1. For refunding taxes received in excess or in error	140,053.000	
2. For refunding taxes	2,880.000	
3. For the refunding of miscellaneous moneys received in excess or in error	72,004.000	
4. For covering losses	37,050.000	
		251,987.000
ART. V.—Fund for the relief of agricultural distress:		
1. Central fund	300,000.000	
2. Amount for cities and prefectures	900,000.000	
		1,200,000.000
ART. VI.—Subsidies:		
1. Subsidy to the Japan Railway Company	376,648.000	
2. Subsidy to the Japan Mail S. S. Company	480,000.000	
		1,256,648.000
ART. VII.—Fund for the encouragement of industries		343,750.000
ART. VIII.—Appropriation to the fund for the redemption of the paper currency		3,000,000.000
ART. IX.—Appropriation to the fund for the improvement of forests		340,160.000
ART. X.—Reserve funds in the treasury:		
1. First reserve fund	500,000.000	
2. Second reserve fund	500,000.000	
		1,000,000.000
Total for the department of state, for finance		10,721,169.000

EXPENDITURES IN THE DEPARTMENT OF STATE FOR WAR.

ART. I.—The department proper:		
1. Pay, salaries, and allowances	272,462.000	
2. Office expenses	71,106.000	
3. Traveling expenses	51,635.000	
		395,203.000
ART. II.—Army expenses:		
1. Pay, salaries, and allowances	4,292,070.041	
2. Office expenses	808,854.000	
3. Confidential service expenses	14,951.000	
4. Expenses for maneuvers and drills	318,592.000	
5. Expenses for arms and ammunition	977,016.000	
6. Traveling expenses	314,809.000	
7. Expenses for provisions	1,727,629.000	
8. Expenses for clothing	1,769,060.000	
9. Repairs and constructions	570,563.000	
10. Expenses for horses	454,937.000	
11. Expenses for medicaments	35,884.000	
12. Expenses for prisoners	52,359.000	
13. Expenses of guards during the Emperor's progress	1,215,000.000	
		11,337,489.041

	Yen.	
ART. III.—Expenses for gendarmes:		
1. Pay, salaries, and allowances	245,112.000	
2. Office expenses	55,232.000	
3. Traveling expenses	2,546.000	
4. Repairs and constructions	1,150.000	
5. Confidential service expenses	6,000.000	
6. Expenses for prisoners	3,312.000	
		313,352.000
Total for the department of state for war		12,045,994.041

EXPENDITURES IN THE DEPARTMENT OF STATE FOR THE NAVY.

ART. I.—The department proper:		
1. Pay, salaries, and allowances	392,113.950	
2. Office expenses	54,502.000	
3. Traveling expenses	56,822.000	
4. Repairs and constructions	9,768.000	
		513,205.950
ART. II.—Expenses of the navy:		
1. Pay, salaries, and allowances	2,539,666.090	
2. Office expenses	554,272.000	
3. Traveling expenses	120,103.000	
4. Repairs and constructions	180,944.000	
5. Confidential service expenses	20,807.000	
6. Expenses for coal	163,227.000	
7. Expenses for the clothing of petty officers	306,717.000	
8. Expenses for prisoners	11,946.000	
9. Repairs to men-of-war and other vessels	322,485.000	
10. Expenses for arms and torpedoes	511,917.000	
11. Expenses for medicaments	32,561.000	
12. Expenses for cadets	87,347.440	
13. Fund for relief	143,300.000	
14. Expenses for maneuvers and drills	20,000.000	
		5,015,292.530
ART. III.—Expenses from special sources:		
1. Expenses for the construction of men-of-war	4,539,364.480	
2. For torpedoes for coast defense	480,000.000	
3. For establishing the Kuré naval station	557,886.840	
4. For establishing the Saseho naval station	263,503.330	
5. For establishing a gunpowder manufactory	127,650.000	
6. For the canal works at Nagaura	50,000.400	
7. For arms	233,064.000	
8. For the naval college	211,392.000	
		6,462,861.000
ART. IV.—Expenses for works under the department:		
1. Part payment of the purchase money of the Onohama dock yard		14,693.000
Total for the department of state for the navy		12,006,052.480

EXPENDITURES IN THE DEPARTMENT OF STATE FOR JUSTICE.

ART. I.—The department proper:		
1. Salaries and allowances	169,709.000	
2. Office expenses	52,745.000	
3. Traveling expenses	14,564.000	
4. Expenses for students	9,600.000	
5. Repairs and constructions	4,500.000	
		251,118.000
ART. II.—Court of cassation and other courts:		
1. Salaries and allowances	1,781,876.000	
2. Office expenses	326,211.000	
3. Traveling expenses	95,562.000	
4. Confidential service expenses	1,510.000	
5. Repairs and constructions	151,367.000	
6. Supplementary expenses of registry offices	184,052.000	
		2,540,578.000
Total for the department of state for justice		2,791,696.000

EXPENDITURES IN THE DEPARTMENT OF STATE FOR EDUCATION.

	Yen.	
ART. I.—The department proper:		
1. Salaries and allowances	151,582.000	
2. Office expenses	32,552.000	
3. Traveling expenses	15,041.000	
4. Expenses for students	25,864.000	
5. Expenses for books and models	3,371.000	
6. Repairs and constructions	81,536.000	
		309,946.000
ART. II.—Expenses for educational institutions:		
1. Salaries and allowances	408,413.000	
2. Office expenses	99,509.000	
3. Traveling expenses	7,870.000	
4. Expenses for students	29,168.000	
5. Repairs and constructions	20,420.000	
		565,380.000
ART. III.—Subsidies:		
1. Subsidy to the asylum for the blind and deaf	3,000.000	
2. Subsidy to the Doitsu-kyo-kai school	10,000.000	
		13,000.000
Total for the department of state for education		888,326.000

EXPENDITURES IN THE DEPARTMENT OF STATE FOR AGRICULTURE AND COMMERCE.

ART. I.—The department proper:		
1. Salaries and allowances	258,121.000	
2. Office expenses	97,819.000	
3. Traveling expenses	46,748.000	
4. Repairs aud constructions	13,030.000	
5. Expenses for experiments	6,321.000	
6. Expenses for local union competitive exhibitions	10,000.000	
7. Expenses for the college of agriculture and dendrology	75,242.000	
8. Expenses for the Shimosa sheep-farm	15,445.000	
		522,726.000
ART. II.—Subsidies:		
1. Subsidies for agriculture and industries		15,749.000
Total for the department of state for agriculture and commerce		538,475.000

EXPENDITURES IN THE DEPARTMENT OF STATE FOR COMMUNICATIONS.

ART. I.—The department proper:		
1. Salaries and allowances	960,707.000	
2. Office expenses	376,582.000	
3. Traveling expenses	70,354.000	
4. Repairs and constructions	34,808.000	
5. Repairs and construction of light-houses, light-ships, and buoys	11,000.000	
6. Repairs and construction of telegraphs	185,000.000	
7. Expenses for vessels and boats	5,250.000	
8. Expenses for the manufacture, handling, and taking back of postal and telegraph stamps	257,524.000	
9. Expenses for international, postal, and telegraphic unions	900.000	
10. Postal and telegraphic expenses	1,509,903.000	
11. Expenses for the management of the funds of the postal money-order system	45,725.000	
12. Expenses for the management of the postal savings-banks	59,208.000	

	Yen.	
ART. I.—The department proper—Continued.		
13. Expenses for the Tokyo school of commercial navigation	19,642.000	
14. Expenses for the school of telegraphy	27,787.000	
		3,564,450.000
ART. II.—Subsidies:		
1. Subsidies for navigation		28,000.000
Total for the department of state for communications		3,592,450.000

EXPENDITURES IN THE SENATE.

ART. I.—The senate:		
1. Salaries and allowances	267,253.000	
2. Office expenses	14,049.000	
3. Traveling expenses	585.000	
4. Repairs and constructions	3,425.000	
Total expenditure in the senate		285,312.000

EXPENDITURES IN THE BOARD OF AUDIT.

ART. I.—The board of audit:		
1. Salaries and allowances	79,564.000	
2. Office expenses	9,877.000	
3. Traveling expenses	3,000.000	
4. Repairs and constructions	500.000	
Total expenditure in the board of audit		92,441.000

EXPENDITURES IN THE RAILWAY BUREAU.

ART. I.—The railway bureau:		
1. Salaries and allowances	14,691.000	
2. Office expenses	1,747.000	
3. Traveling expenses	1,970.000	
4. Repairs and constructions	360.000	
Total in the railway bureau		18,768.000

EXPENDITURES IN HOKKAIDO ADMINISTRATION BOARD.

ART. I.—The Hokkaido administration board:		
1. Salaries and allowances	513,548.389	
2. Office expenses	123,646.566	
3. Traveling expenses	90,746.000	
4. Repairs, constructions, and engineering works	21,718.000	
5. Expenses connected with stamps and licenses	288.000	
6. Expenses for new undertakings	500,000.000	
7. Expenses for agricultural and industrial works	11,342.000	
8. Rewards and relief	17,981.000	
9. Expenses for clothing and implements	34,588.000	
10. Expenses for prisoners	206,965.045	
11. Expenses for wrecked vessels and seamen	448.000	
12. Expenses of the agricultural college	43,522.000	
13. Expenses for the competitive exhibition of Hokkaido products	2,639.000	
14. Aids to local expenses	520,817.000	
15. Funds placed in reserve	100,000.000	
Total expenditures in the Hokkaido administration board		2,188,259.000
Grand total		55,528,388.521

Part 4.

ART. I.—Expenditure for the building of the imperial temporary palace:	Yen.	
1. Expenses of construction	130,000.000	
2. Office expenses	70,000.000	
		200,000.000
ART. II.—Expenditures for the periodical construction of the Jingu:		
1. Office expenses	5,850.000	
2. Expenses for construction	17,838.000	
3. Expenses for decoration	31,000.000	
		54,688.000
ART. III.—Expenditures for the erection of departmental and national assembly buildings:		
1. Office expenses	133,673.000	
2. Expenses for construction	280,000.000	
3. Purchases of land and buildings thereon	55,000.000	
		468,673.000
ART. IV.—Expenditures for the committee on laws		21,298.000
ART. V.—Expenditures for exhibitions:		
1. Expenses for the national industrial exhibition	10,000.000	
2. Expenses for the international exhibition at Barcelona, Spain	15,000.000	
		25,000.000
Total of Part IV		769,659.000
Grand total of expenditures		79,935,552.754

Statement of details relating to the budget for the twentieth year of Meiji.

The total amount of the revenue, as estimated in the budget for the 20th year of Meiji, is 79,936,870 yen, and that of the expenditure is 79,935,552.754 yen. The excess of revenue over expenditure is 1,317,246 yen. Compared with the budget of the preceding fiscal year, that of the 19th year of Meiji, wherein the total amount of revenue was 74,695,415 yen, and that of expenditure was 74,689,014 yen, the increase of the budget of the 20th fiscal year of Meiji is 5,241,455 yen in revenue and 5,246,538,754 yen in expenditure.

REVENUE.

Part 1.

The estimates for the twentieth fiscal year, amounting to 65,102,123 yen, are reduced by 2,631,072 yen, as compared with those for the nineteenth, which amount to 67,733,195 yen. The causes of the decrease are as follows:

Increase.—145,066 yen in taxes on confectionery and on drugs, due to the improvement in inspection of the same; 82,779 yen in customs duties, due to the prospect of an increase in exports; 29,753 yen in judicial stamps, taxes on ships, etc.; total, 257,598 yen.

Decrease.—599,382 yen in land taxes, due to the abolition of fees for putting the official seal upon title deeds of land by the registry regulations (Law No. 1, August 11, 19th Meiji); 262,734 yen in the same tax, due to its proposed revision in the Hokkaido and to the changes of classification of lands in cities and prefectures; 452,081 yen in stamp duties and taxes on tobacco, due to the establishment of a system of discount in the sale of stamps, by ordinance No. 21 of the department of state for finance, June, 19th Meiji; 338,425 yen in taxes on marine products of the Hokkaido, due to the proposed revision of the system of taxation thereof; 71,177 yen in taxes on rice exchanges and on stock exchanges, due to a decrease of transactions therein; 1,154,618 yen in taxes on sake, due to the decrease in demand for the same; and 10,253 yen in horse and cattle dealers' licenses and in shooting licenses; total, 2,888,670 yen.

Part 2.

The estimates for the twentieth fiscal year, amounting to 8,348,507 yen, are increased by 1,386,287 yen. as compared with those for the nineteenth, which amount to 6,962,220 yen, the causes of which are as follows:

Decrease.—87,570 yen in postal and telegraphic receipts, due to the decrease in the sales of postage and telegraphic stamps; 167,538 yen in rents and sales of Government property, due to the decrease of sales; 65,389 yen in repayment of Government advances, owing to the gradual decrease of the amounts due; 60,296 yen in receipts from Government industries, due to a decrease in railway passenger and freight traffic; 251,340 yen in the same, due to the decrease of copper coinage; and 282,389 yen in the same, due to the suspension of the working of the several factories in the Hokkaido and elsewhere or to the transfer of the same to private undertakings; total, 914,522 yen.

Increase.—2,267,667 yen in licenses and fees, in consequence of the registry regulations (Law No. 1, August 11, 19th Meiji); 24,186 yen in revenue from forests, due to the increased sales of dead or injured trees for the improvement of the forestry system, and 8,956 yen in miscellaneous receipts; total, 2,300,809 yen.

Part 3.

The cause of an increase of 6,486,240 yen in this part of the revenue in the twentieth fiscal year is as follows: After the promulgation of the budget for the 19th year of Meiji, a national loan of 17,000,000 yen was sanctioned by the navy loan regulations (Imperial Decree No. XLVII, June, 19th Meiji, for the purpose of strengthening the navy. During the said year bonds were issued to the amount of 5,000,000 yen, and another issue of the same amount is proposed for the twentieth fiscal year.

EXPENDITURE.

Part 1.

The estimates for the twentieth fiscal year, amounting to 20,885,593.983 yen, are increased by 156,550,983 yen, as compared with those of the nineteenth fiscal year, the causes of which are as follows:

Decrease.—2,148 yen in annuities for meritorious services, due to the decrease in the number of recipients thereof, either by death or by forfeiture.

Increase.—45,442.983 yen in pensions, principally due to the increase of civil pensions, in accordance with the civil service pension regulations (Notification No. 1, of the council of state, January. 17th Meiji); 739 yen in allowances, due to the increase in the number of recipients in the Okinawa prefecture; and 112,517 yen in salaries of officers not in actual service, due to the increase in the number of the same; total, 158,698.983 yen.

Part 2.

The estimates for the twentieth fiscal year, amounting to 2,751,911.25 yen, are increased by 143,698.25, as compared with those for the nineteenth, which amount to 2,608,213 yen. The causes of the increase are as follows:

Decrease.—16,301.75 yen in expenditures for shrines, due to the creation of a new system of annual donation to governmental and national shrines for a preservation fund, to be continued for fifteen years from the 20th year of Meiji, in order to secure their gradually becoming self-supporting.

Increase.—160,000 yen in the expenses of the imperial household.

Part 3.

The estimates for the twentieth fiscal year, amounting to 55,528,388.521 yen, are increased by 4,722,407.521 yen, as compared with those for the nineteenth, which amount to 50,805,921 yen. The principal causes of increase and decrease in each department and office are as follows:

In the cabinet the estimates for the twentieth fiscal year, amounting to 605,136 yen, are increased by 34,831 yen, as compared with those of the nineteenth, which amount to 570,305. But if we deduct from this increase the sum of 71,896 yen, which is to be applied to the extension of the business of the Official Gazette, and which is balanced by an increase in the revenue, it becomes, on the contrary, a decrease of 37,065 yen, which is due to a reduction in salaries and in other items.

In the department for foreign affairs the estimates for the twentieth fiscal year, amounting to 840,187 yen, are increased by 959 yen, as compared with those for the nineteenth, amounting to 839,228 yen. This is due to changes in the personnel of the legations abroad.

In the department for home affairs the estimates for the twentieth fiscal year, amounting to 8,914,123 yen, are increased by 528,231 yen, as compared with those for the nineteenth, which amount to 8,385,892 yen. This is due to the following causes: The practice of strict economy in the department proper and in the central police board reduces the expenses by 36,170 yen and 1,812 yen, respectively, making the sum of 37,982 yen in both. But the amalgamation of the hitherto separate items, viz, "river improvement expenditure" and "supplementary expenditures," under one head of "expenditures for engineering works," with an annual appropriation of 1,500,000 yen, brings about an increase of 506,213 yen. Another increase of 60,000 yen arises in supplementary expenditures, in consequence of subsidies for the reconstruction of prisons and for meteorological observatories. Hence the increase above referred to. In the 19th year of Meiji, city and prefectural expenses formed distinct articles, one for each city and prefecture, but they have been amalgamated into one article, commencing with the twentieth year, for the convenience of the financial management. However, there is no difference between the total sum of the estimates for this year (5,999,346 yen) and that of those for the nineteenth.

In the department of finance, the estimates for the twentieth fiscal year, amounting to 10,721,169 yen, are reduced by 2,175,165 yen as compared with those for the nineteenth, which amount to 12,896,334 yen. The causes of it are as follows: There is an increase of 171,987 yen for re-imbursements and losses, due to the repayment of taxes and other contributions received in excess or in error; an increase of 1,256,948 yen on account of guaranty of the interest on the capital of the Japan Mail Steamship Company and on part of that of the Japan Railway Company, paid up for the construction of the second and third sections of the road; an increase of 18,750 yen in the fund for the encouragement of industries, due to the difference in the amount of the annual appropriations; an increase of 290,000 yen in the contingent reserve fund, on account of the increased necessity therefor, the calculation of which is based upon the actual state of things existing in the nineteenth year; and lastly, an increase of 340,160 yen, a sum to be transferred to the fund for the improvememt of forests, a special one newly created for the purpose of applying the proceeds from forests to the defraying of the expenses of the administration of forests; making the total increase one of 2,077,545 yen.

On the other hand, the decrease of 51,082 yen in the department proper, and of 507 yen in custom-houses, both due to the practice of economy; a decrease of 152,531 yen in expenses in collecting internal taxes, in consequence of ordnance No. 21 of the department of finance, June, 19th Meiji, which revised the method of selling stamps, abolishing commissions on sales thereof; a decrease of 4,000,000 yen in the appropriation for the fund for the redemption of paper money, in order to apply the same to other necessities, as a solid basis had already been secured for the conversion of the paper currency; a decrease of 40,000 yen in the expenses for the establishment of Government industrial undertakings; and lastly a decrease of 8,500 yen in expenses for managing the unsettled business of the abolished department of public works, due to the final settlement of the same during the nineteenth year, making a total decrease of 4,252,710 yen.

In the department of war, the estimates for the twentieth fiscal year, amounting to 12,045,994.041 yen, are increased by 45,994.041 yen, as compared with the nineteenth, which amount to 12,000,000. Of this increase, 18,125 yen arise from allowances and traveling expenses for the European tour of H. I. H. Lieutenant-General Prince Aki-hito and suite; the balance, 27,869.041 yen, arises from the establishment of an insular militia in the island of Tsushima.

In the department of the navy, the estimates for the twentieth fiscal year, amounting to 12,006,052.48 yen, are increased by 6,712,588.48 yen as compared with those for the nineteenth, which amount to 5,293,464 yen. This is due to the following causes: In the department proper a reduction to the amount of 29,970.050 yen has been effected by the practice of economy. But in the expenses of the navy there is an increase of 265,004.530 yen on account of the increased number of men-of-war. With regard to the expenses for the construction of war vessels, they were left (in the budget for the nineteenth fiscal year) to special resources, and were excluded from the list of expenditures therein. However, after the settlement of the budget, a public loan was authorized by the navy loan regulations (Imperial decree No. XLVII, June, 19th Meiji), and 5,000,000 yen, a sum raised by the issue of the said bonds, was appropriated to the above purpose as an additional credit. (The result of the expenditure will be shown in the actual account for the year.) The same plan is followed in the twentieth fiscal year, and 6,462,861 yen are appropriated

under the heading of payments from special resources. Moreover, 14,693 yen are needed in "the expenses of Government undertakings," on account of the part payment of the purchase money of the Onohama dock-yard. Thus, deducting from the total amount of increase, 6,742,558.530 yen, that of decrease, 29,970.050 yen, there results the increase above referred to.

In the department of justice the estimates for the twentieth fiscal year, amounting to 2,791,696 yen, are increased by 289,699 yen as compared with those for the nineteenth, which amounts to 2,501,997 yen. This is due to the fact that notwithstanding that the practice of economy reduces the expenses in the department proper by 10,447 yen, the expenses for the court of cassation and for other courts are increased by 300,146 yen, due partly to the improvement of the judicial system and partly to the execution of the registry regulations (Law I, August 11, 19th, Meiji).

In the department of education the estimates for the twentieth fiscal year, amounting to 888,326 yen, are increased by 30,000 yen as compared with those for the nineteenth, which amount to 858,326 yen. Of this increase 14,820 yen are in the department proper, notwithstanding the practice of economy; it arises principally on account of the new buildings for the chemical laboratory in the college of sciences in the Imperial university; 5,180 yen are for expenses for educational institutions in consequence of the establishment of an increased number of higher middle schools in accordance with the new educational system; and 10,000 yen are for an allowance in aid of the school of the "Doitsu-gaku-kiyo-kwai."

In the department of agriculture and commerce the estimates for the twentieth fiscal year, amounting to 538,475 yen, are reduced by 331,821 yen as compared with those for the nineteenth, which amount to 870,296 yen. This is due to the fact that, notwithstanding there is an increase of 6,400 yen in subventions for the encouragement of agriculture and of industries, the practice of strict economy reduces the expenses in the department proper by 13,221 yen; and also the creation of a special fund for forestry reduces the expenses for forests by 325,000 yen; the two items amounting to 338,221 yen.

In the department of communications the estimates for the twentieth fiscal year, amounting to 3,592,450 yen, are reduced by 75,907 yen as compared with those of the nineteenth, which amount to 3,668,357 yen. This is due to the practice of economy in the department proper.

In the senate the estimates for the twentieth fiscal year, amounting to 285,312 yen, are reduced by 24,410 yen as compared with those of the nineteenth, which amount to 309,722 yen. This decrease is due partly to the decrease in the number of senators and partly to the practice of strict economy.

In the board of audit the estimates for the twentieth fiscal year, amounting to 92,441 yen, are increased by 441 yen as compared with those for the nineteenth, which amount to 92,000 yen. The cause of the increase lies in the increase of salaries, notwithstanding that strict economy is practiced.

In the railway bureau the estimates for the twentieth fiscal year, amounting to 18,768 yen, are reduced by 1,232 yen as compared with those for the nineteenth, which amount to 20,000 yen. This decrease is due to curtailment of expenses.

In the Hokkaido administration board the estimates for the twentieth fiscal year, amounting to 2,188,259 yen, are reduced by 311,741 yen as compared with those for the nineteenth, which amount to 2,500,000 yen. This decrease is due to an improvement in its financial management and to the practice of strict economy in the office.

Part 4.

The estimates for the twentieth fiscal year, amounting to 769,659 yen, are here increased by 223,822 yen as compared with those for the nineteenth, which amount to 545,837 yen. A reduction of the sum of 300,000 yen is effected in the expenditures for the building of the Imperial temporary palace in consequence of that sum having been advanced in the preceding year out of the annual appropriation for the twentieth year, 500,000. But an increase of 454,940 yen is found in the expenditures for erecting departmental and national assembly buildings, due to the progress of the works. The expenditures for the periodical construction of the Jingu show an increase of 22,584 yen, in consequence of increased requirements for decoration and other items, and for the expenses of the committee on laws there is an item of 21,298 yen. Another increase is found in the expenses for exhibitions, of which 15,000 yen is for the international exhibition in Spain and 10,000 yen for the preparatory expenses of the third national industrial exhibition to be held in the twenty-third year of Meiji. The total increase is 523,822 yen.

The annexed comparative table is herewith presented showing the increase and decrease on the 31st December, the 19th Meiji (1886), in the amount of the national debt, of that of the reserve fund, of advances by the Government, of the central

fund for the relief of agricultural distress, and of the special fund, as compared with similar amounts in the tables annexed to the budgets of the last four fiscal years, beginning with the 16th of Meiji (1883).

Count MATSUGATA MASAYOSHI,
Minister of State for Finance.

To Count ITO HIROBUMI,
Minister President of State.

Second day of the third month of the twentieth year of Meiji.

Comparative table of the national debt, the reserve fund, etc., for the sixteenth, seventeenth, eighteenth, nineteenth, and twentieth fiscal years of Meiji.

Headings.	Twentieth year.	Nineteenth year.	Eighteenth year.	Seventeenth year.	Sixteenth year.
	Yen.	*Yen.*	*Yen.*	*Yen.*	*Yen.*
National debt	241,491,249.500	245,427,329.000	239,052,926.500	231,294,653.000	237,075,484.000
New debt	10,591,275.000	10,591,275.000	10,652,850.000	10,752,450.000	10,852,925.000
Kinsatsu exchange bonds	5,766,050.000	5,766,050.000	5,884,950.000	6,070,350.000	5,844,800.000
Unregistered Kinsatsu exchange bonds	7,929,900.000	7,929,900.000	1,433,000.000	1,250,000.000	.....
Hereditary pension bonds	154,935,685.000	164,862,535.000	168,835,335.000	171,835,335.000	172,835,525.000
Ex-Shinto priests' pension bonds	.....	94,825.000	115,275.000	147,125.000	166,800.000
Loans for public works	10,740,350.000	10,760,350.000	10,996,250.000	11,331,950.000	11,649,050.000
Nakasendo Railway bonds	20,000,000.000	20,000,000.000	15,000,000.000	3,091,600.000	.....
Navy bonds	5,000,000.000	.....	.....	.....	.....
Consolidated bonds	1,325,050.000	.....	.....	.....	.....
Foreign debt	7,522,082.000	7,522,082.000	8,015,400.000	8,476,072.000	8,906,488.000
Money borrowed for the suppression of the S. W. rebellion	10,000,000.000	10,000,000.000	10,000,000.000	10,000,000.000	15,000,000.000
Old debt	7,680,907.500	7,990,362.000	8,119,816.500	8,339,271.000	8,555,196.000
Voluntarily capitalized pension bonds	.....	.....	.....	.....	3,265,050.000
Paper money	67,263,274.600	76,934,727,900	89,909,230.000	93,414,360.800	98,290,352.800
Reserve fund	37,043,419.174	43,865,408.060	45,971,535.837	47,403,156.043	53,415,490.442
Advances by Government	18,242,179.653	18,316,823.608	20,085,025.344	23,696,128.400	10,061,559.297
Central fund for the relief of agricultural distress	3,069,701.979	2,710,947.752	2,412,754.482	2,230,554.743	1,897,695.223
Special fund	1,290,656.046	1,216,677.546	1,043,113.877	1,000,000.000	884,508.020

Headings.	Comparisons (increase +, decrease —).			
	Nineteenth year.	Eighteenth year.	Seventeenth year.	Sixteenth year.
	Yen.	*Yen.*	*Yen.*	*Yen.*
National debt	— 3,936,079.500	+ 2,488,328.000	+10,196,596.500	+ 4,415,415.500
New debt	.....	— 61,575.000	— 161,175.000	— 261,650.000
Kinsatsu exchange bonds	.....	— 118,900.000	— 304,300.000	— 78,870.000
Unregistered Kinsatsu exchange bonds	.....	+ 6,496,900.000	+ 6,679,900.000	+ 7,929,900.000
Hereditary pension bonds	— 9,926,850.000	—13,899,700.000	—16,900,150.000	—17,899,840.000
Ex-Shinto priests' pension bonds	— 94,825.000	— 115,275.000	— 147,125.000	— 166,800.000
Loans for public works	— 20,000.000	— 255,900.000	— 591,600.000	— 908,700.000
Nakasendo Railway bonds	.....	+ 5,000,000.000	+16,908,400.000	+20,000,000.000
Navy bonds	+ 5,000,000.000	+ 5,000,000.000	+ 5,000,000.000	+ 5,000,000.000
Consolidated bonds	+ 1,325,050.000	+ 1,325,050.000	+ 1,325,050.000	+ 1,325,050.000
Foreign debt	.....	— 493,318.000	— 954,040.000	— 1,384,456.000
Money borrowed for the suppression of the S. W. rebellion	.....	.....	.....	— 5,000,000.000
Old debt	— 219,454.500	— 438,909.000	— 658,363.500	— 874,288.500
Voluntarily capitalized pension bonds	.....	.....	.....	— 3,265,050.000
Paper money	— 9,671,453.300	—22,645,955.400	—26,151,086.200	—31,027,077.700
Reserve fund	— 6,821,988.886	— 8,928,116.663	—10,359,736.869	—16,372,071.268
Advances by Government	— 74,653.950	— 1,842,855.691	— 5,453,958.747	— 819,389.644
Central fund for the relief of agricultural distress	+ 358,754.227	+ 656,947.497	+ 839,147.236	+ 1,172,006.741
Special fund	+ 73,978.500	+ 247,542.169	+ 290,656.046	+ 406,148.026

The principal items of increase or decrease in this table are as follows:

There is a decrease in the national debt, due to the fact that a reduction by a sum of 10,261,129 yen has been effected by the whole redemption of 10 per cent. heredi-

tary pension bonds and ex-Shinto priest pension bonds, and by the gradual amortizement of other debts, although an increase of a sum of 6,825,050 yen has been incurred by the issue of new bonds, in conformity with the consolidated loan act (Imperial decree No. 66, October 16, 19th Meiji) and with the navy loan act (Imperial decree No. 47, June 12, 19th Meiji).

The decrease in the amount of paper money in circulation is due to the conversion into silver coin of the sum of 9,671,350 yen more, and to the withdrawal of altered paper money to the amount of 103 yen more.

The decrease in the reserve fund is due to the following facts: Although the sum of 5,620,000 yen was transferred from the general account to the fund for the redemption of paper money, the sum of 2,376,038 yen more was paid out of the military reserve fund and out of the sinking fund into the general account of the 18th fiscal year; a sum of 394,599 yen more was lost in exchanging paper money for specie, and lastly, the sum of 9,671,350 yen more was paid out in silver coin for the redemption of paper money. Thus the total decrease amounts to 12,441,987 yen more.

The decrease in the advances by Government is due to the following causes: Overpayments and arrears of sales and rents belonging to past fiscal year, which have been hitherto received as miscellaneous receipts of the ordinary budget for the current years, have been transferred to advances, and thus there is an increase of the sum of 1,408,828 yen more in that item. Another increase of 1,740,595 yen is due to the transferring of the coinage fund, hitherto held by the mint, into advances. Thus the total increase is 3,149,424 yen. But a sum of 1,248,090 yen was paid back, and another sum of 1,975,987 yen was either abandoned or liquidated, thus making the total decrease of 3,224,078 yen.

The increase in the central fund for the relief of agricultural distress arises principally from the transfer thereto of a fixed annual sum from the appropriation for ordinary expenditures of the 19th fiscal year, in accordance with the regulations for the fund for the relief of agricultural distress, and from the receipt of interest on the capital for the above fund.

The increase in the special fund is due to the receipt of profit on Kinsatsu exchange bonds purchased.

SIAM.

REPORT OF MINISTER CHILD.

In reply to your circular, dated April 9, 1887, I regret to state that it is impossible for me to obtain the remotest idea of the budget of Siam. During the past two years the King has been endeavoring to consolidate the resources of the Kingdom into his own hands, making the various farmers report directly to their chief of the exchequer, and thus taking it out of the hands of the princes, who have heretofore been acting as middle-men. The revenue of the Kingdom is derived from various sources: First, imports and exports; second, direct taxation, which embraces everything, as you will see by a "statement of taxes and sources of revenue of the Siamese Government," forwarded by General Halderman to the Department of State in his No. 95, Diplomatic Series, dated April 23, 1884, a copy of which is herewith inclosed, and since which time there has been no change therein; third, donations to His Majesty, as, for instance, the governor of Chantaboon has just received an order from the King to furnish him with 240 logs of timber, 50 feet in length, for the purpose of erecting a cremation building next spring, which he must furnish at his own expense; hence it is impossible to approximate anything near the actual revenue of the Kingdom, as no budget is published, and the officials refuse to give any information whatever; but from what I can learn from those conversant with the subject, it must be in the neighborhood of $10,000,000, all of which the King disburses himself, his officials

having to submit to him all accounts of expenditures before he will authorize their payment. As it is, many of the departments are behind from six to eighteen months; the only department that pays promptly is the post and telegraph, most of the employés having contracts that require payments monthly. The Siamese are particularly jealous of outside scrutiny into their affairs; they will give you no information whatever, but reply with politest of evasives. To sum it up briefly, the Government of Siam is a close corporation; the King is the only man that knows anything concerning the financial affairs of the country, and he keeps the secret as closely locked as he does his coffers.

JACOB I. CHILD,
Minister.

LEGATION OF THE UNITED STATES,
Bangkok, Siam, September 5, 1887.

[Inclosure.]

STATEMENT OF TAXES AND SOURCES OF REVENUE OF THE SIAMESE GOVERNMENT.

(1) Taxes on exports:
Principal article of export, rice, on which the duty is from 10 to 12 cents per picul.
(2) Taxes on imports:
Uniform rate of 3 per cent. on the market value of the goods.
(3) Taxes on cultivated lands:
About 60 cents an acre.
(4) Taxes on fruit trees, etc.:
A list of the duties is given in the treaty. These taxes are in lieu of land tax.
(5) The revenue derived from certain monopolies which are either in the hands of Government or or farmed out by them, viz:
Preparation and sale of opium.
Manufacture and sale of spirits.
Tax on gambling-houses.
The collection and sale of edible birds' nests.
The collection of turtles' eggs.
The manufacture and sale of cakes and confectionery.
The manufacture of iron pans.
The manufacture of iron.
Taxes on prostitutes.
(6) Taxes on houses, floating houses, shops, godowns, etc.; and on boats employed in a certain manner, viz:

	Ticals.
Boats engaged in carrying bricks.....per fathom..	1
Boats engaged in carrying sand.....do....	1
Boats engaged in carrying tiles.....do....	1
Boats hawking miscellaneous hardware.....do....	1
North country boats, bringing goods to Bangkok for sale.....do....	½
Boats moored with goods for sale, for more than two months, but under twelve months.....per fathom..	½
Boats moored with goods for sale, over twelve months.....do....	1
Floating houses:	
With goods for sale.....per room..	1½ to 3
Used as brothels.....do....	3
Used as lottery stations.....do....	3
Used as gambling-houses.....do....	3
Used as liquor shops.....do....	3
Those rented out.....do....	3

Houses, godowns, shops, etc., on shore, with goods for sale, used as brothels, lottery stations, gambling houses, or liquor shops; also those rented out; if within the district guarded by the police, must pay 12½ per cent. of their annual rental; if not in the district of the police, must pay 8½ per cent. of the rental.

There is also a tax on fresh provision markets.

(7) Inland taxes:

		Ticals.
White sugar	per picul	¼
Red sugar	do	½
Pepper	do	1
		Per cent.
Fish (pla thoo)		8⅓
Teel seed		8⅓
Beans		8⅓
Petchaboon tobacco		10
Silk		8⅓
Beeswax		6⅔
Raw cotton		10
Paw (vegetable fiber)		10
Indigo		10
Salt sea-fish		8⅓
Smoked fish		8⅓
Fresh fish		8⅓
Shrimp paste		10
Charcoal		10
Posts (wood)		10
Cocoanut oil		10
Red and white lime		10
Palm sugar		10
Molasses		8⅓
Tin		10
Fire wood		20
Attap		10
Kacheng		10
Torches		10
Resin		10
Oil of fang tree		10
Rattans		10
Bamboos		10
Redwood		10
		Ticals.
Onions and chilils	per picul	10
Hemp (for sails)	do	10
Vegetables	do	5
Pork	do	8⅓
Fowls	do	8⅓
Ducks	do	8⅓
Eggs of fowls or ducks	do	8⅓
		Per cent.
Blackwood		10
Mai Takean wood		10
Wood called Mai Phya Loi		10
		Ticals.
Salt	(per coyan, or $\frac{3}{10}$ per cent. per picul)	6
		Per cent.
Teakwood		10
Tobacco		10

(8) Taxes on implements used for catching fish in salt or fresh water:

		Ticals.
Rafts, in line, to which nets are attached, for each aperture		4
Boats with large net	per annum	10
Boats with smaller net	do	6
Boats with small net	do	1
Boats with dragging net	do	10
Large round net stretched on crossed bamboos with handle attached, per fathom		1¼
Spoon-net, with wider mouth than 10 cubits	per annum	2
A boat with big spoon net	do	½
A boat with small spoon net	do	¼
Basket used for catching fish in shallow water	do	½

(8) Taxes on implements used for catching fish in salt or fresh water—Continued.

		Ticals.
Net for the fish "Ta phien"	Per annum	1
Harpoon or spear	do	¼
"Laup," a long trap or basket	do	1½
A string of hooks	do	¼
Each line for chawn or kado-fish	do	¼
Small net stretched on two sticks	do	¼
Scoop made of split bamboo	do	¼
Other snares, from	do	¼ to ½
Beds of water-plants in front of houses for attracting fishes, per fathom		¼
Fish pools	per fathom	¼
The following are used in salt water:		
Fishing stakes, disposed in a circle	per annum	6
Fishing stakes, disposed in a circle	do	12
Fishing stakes, in triangular form, with net at apex	do	3
One boat with hooks for dragging	do	2½
Fence for confining shrimps	do	1½
Casting net	do	1
Spoon net for shrimps and prawns	do	½
Fishing stakes	do	10
A large fishing boat	do	6
A very large net used by very many men	do	12
Boat for catching "pla kuraw"	do	4
"Lamoo," a large inclosure of bamboo	do	6
"Lamoo" for deeper water	do	20
Close bamboo fence	do	12
Close bamboo fence for deeper water	do	16
A kind of fishing net	do	16
Net for shrimps	do	20
Net for beche de mer	do	24
Spears for beche de mer	do	4
Harpoon for turtle	do	8
Plank for sliding over the mud	do	¼
Hook and line	do	¼ to ½

(9) The revenue derived from money paid in commutation of Government service, to which all adult males are liable, to which may be added the services performed by coweé.

(10) The revenue derived from a poll-tax of 4½ ticals on Chinese every third year.

(11) Taxes are also levied on theatrical representations and plays of various kinds.

		Ticals.
Drama of "Rama Kien"	per diem	28
Drama of "Anirut"	do	12
Theatrical representation "Nang"	each night	¼
Chinese theater	per diem	2
Chinese puppet show	do	1
Drama "Ih Henao"	do	20
Dramas, various kinds	do	2
Singing	do	¼
Chinese theater (special)	do	4

NOTE.—A picul, 133⅓ pounds avoirdupois; a Siamese tical, 60 cents.

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REPORTS

FROM THE

CONSULS OF THE UNITED STATES.

No. 91.—MARCH, 1888.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1888.

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ON

COMMERCE MANUFACTURES ETC.

No. 91.—MARCH, 1888.

GERMANY'S TRADE AND INDUSTRY.

REPORT OF CONSUL-GENERAL RAINE.

GENERAL OBSERVATIONS, YEAR 1886.

Germany's economical condition during the year 1886 resembled, generally, that of the previous year, Perceptible changes, however, were noticed during the latter half of the year, when prices of some of the manufactures advanced. This advance had a reviving effect upon the industrial branches concerned—for instance, in iron and steel and textile industries, also in the manufactures of leather, fancy goods, colors, and in the sugar industry. A moderate increase also was noticed in manufactures of clay, porcelain, glass, wood, and paper.

EXHIBIT A.—*Average wholesale prices of chief articles in the German Empire during the years* 1881 *to* 1886 *and in the month of September*, 1887.

Articles, measures, and names of markets.	1881.	1882.	1883.	1884.	1885.	1886.	1887.*
Wheat, per 1,000 kilograms (22 cwt.):							
Berlin, good quality	$52.02	$48.05	$44.03	$38.05	$38.03	$35.09	$35.00
Dantzic (province of West Prussia)	50.01	46.07	43.04	37.04	34.01	33.00	29.09
Cologne on the Rhine	56.03	54.00	48.05	42.08	41.03	39.08	37.06
Lindau (Bavaria)	61.05	57.05	54.02	49.09	46.06	48.04	44.08
Rye, per 1,000 kilograms (22 cwt.):							
Berlin, good quality	46.04	36.02	34.04	31.01	33.04	31.00	26.00
Dantzic	44.08	33.06	32.04	33.00	31.02	28.05	28.01
Cologne	51.08	42.04	37.03	36.04	35.09	33.08	29.06
Lindau (Hungarian rye)	52.03	45.07	42.05	43.05	42.03	40.06	40.04
Barley, per 1,000 kilograms (22 cwt.):							
Dantzic	36.02	31.03	31.05	32.09	31.05	28.09	24.01
Lindau	50.07	46.05	44.05	45.03	42.05	42.00	40.06
Magdeburg	44.06	43.01	39.05	41.09	37.09	37.04	34.08
Munich	45.05	44.04	40.05	42.03	38.06	38.00	38.00
Oats, per 1,000 kilograms (22 cwt.):							
Berlin	35.08	31.05	30.05	31.02	31.09	28.06	21.04
Dantzic	37.04	29.09	30.02	31.03	31.03	28.03	22.00
Cologne	39.05	37.00	34.07	34.03	33.09	32.09	28.01
Lindau	37.08	39.03	32.04	35.07	35.07	35.00	33.05

*September.

EXHIBIT A.—*Average wholesale prices of chief articles in the German Empire during the years* 1881 *to* 1886 *and in the month of September*, 1887—Continued.

Articles, measures, and names of markets.	1881.	1882.	1883.	1884.	1885.	1886.	1887.*
Potato spirits, per 10,000 liters (2,200 gals.):							
Berlin	$13.00	$11.06	$12.07	$11.03	$9.09	$8.08	$15.03
Mannheim (Baden)	15.05	13.01	13.09	12.01	10.04	9.00	14.09
Posen	12.06	11.02	12.02	11.00	9.06	8.04	15.06
Sugar, per 100 kilograms (2.2 cwt.):							
a. Raw sugar:							
Cologne, light grain, 96 per cent	16.01	15.08	14.08	11.07	11.09	10.07	11.03
Magdeburg, first quality, 96 per cent	15.06	15.02	14.03	11.01	11.02	10.01	.....
b. Sugar, refined:							
Cologne	19.08	19.05	18.02	14.09	14.09	13.02	13.02
Magdeburg, first quality, in loaves	19.02	19.01	17.07	14.06	14.01	12.09	.....
Iron:							
Westphalian puddling	18.06	15.04	13.07	12.00	10.05	9.07	11.01
Dusseldorf at the works:							
Best German puddling	14.00	15.03	13.07	11.09	10.06	9.07	11.01
Best German foundry	17.04	17.08	17.04	15.00	13.09	12.03	12.08
Lead, per 100 kilograms (2.2 cwt.):							
Berlin	7.04	7.01	6.04	5.05	5.06	6.03	5.08
Halberstadt, refined, soft, at the works	.....	6.04	5.07	4.09	5.01	5.09	5.04
Cologne, double refined, soft	6.09	6.07	5.09	5.01	5.03	6.01	5.06
Copper, per 100 kilograms (2.2 cwt.):							
Berlin	33.04	34.09	33.06	29.09	25.03	22.02	21.00
Hamburg, English, in blocks	32.04	35.07	33.05	30.00	23.02	20.09	21.01
Zinc, per 100 kilograms (2.2 cwt.):							
Breslau	7.03	7.05	6.09	6.05	6.02	6.02	6.08
Cologne	7.03	8.01	7.03	6.09	6.07	6.07	7.02
Tin, per 100 kilograms (2.2 cwt.):							
Hamburg	47.08	54.00	49.07	44.00	46.09	52.01	53.00
Petroleum, per 100 kilograms (2.2 cwt.), with barrel:							
Bremen, American white, refined	3.08	3.04	3.07	3.06	3.05	3.00	3.06
Stettin, American white, K. P	4.01	3.06	4.00	3.09	3.07	5.03	5.00
Pit coal, per 1,000 kilograms (22 cwt.):							
Breslau:							
Nether Silesian, for gas	2.04	2.04	2.03	2.03	2.03	2.03	2.03
Upper Silesian, for gas	1.05	1.04	1.04	1.04	1.03	1.04	1.04
Dantzic double-sifted nut coal, delivered on board:							
English	3.03	3.02	3.01	3.01	2.09	2.09	2.08
Scottish machine coal	3.05	3.01	3.00	3.01	2.08	2.07	2.06
Dortmund lump coal, at the pits:							
Lump coal, for export	1.09	1.08	1.07	1.07	1.07	1.06	1.05
Puddling coal, good quality	1.02	1.02	1.04	1.04	1.02	1.00	1.01
Saarbruck open-burning coal	.....	1.09	1.09	1.09	1.09	1.08	1.07
Coffee, per 100 kilograms (2.2 cwt.):							
Bremen (Rio), good ordinary	24.08	19.07	19.06	22.03	19.04	21.06	41.05
Frankfort-on-the-Main (Java) good ordinary	41.03	35.00	37.04	36.06	33.06	36.01	55.06
Hamburg (Santos)	25.08	19.08	21.06	22.03	19.03	21.07	42.07
Mannheim (Ceylon) good middling quality	55.07	52.04	52.02	49.07	47.06	49.09	59.05
Rice, per 100 kilograms (2.2 cwt.):							
Bremen (Rangoon), peeled, best quality	6.01	5.01	5.01	5.01	4.09	4.09	4.06
Hamburg (Rangoon), lowest quotation	5.04	4.05	4.07	4.07	4.04	4.00	4.01
Herrings, each cask at 150 kilograms:							
Stettin:							
Crown matties, incl. of casks	7.08	8.01	9.05	7.09	7.04	6.05	7.03
Scottish matties, incl. of casks	7.02	7.09	8.04	6.08	7.09	4.03	4.07
Tobacco, manufactured, per 100 kilograms (2.2 cwt.):							
Bremen:							
Kentucky, ordinary, including packing	14.00	15.00	15.07	19.06	17.09	12.06	12.08
Brazil, second quality	21.00	19.03	21.01	19.07	18.09	23.06	21.08
Hamburg:							
Domingo	26.09	26.03	21.02	23.08	23.06	23.05	23.08
Brazil	27.03	26.07	26.01	25.07	25.00	23.03	26.01
Cotton, per 100 kilograms (2.2 cwt.):							
Bremen (Oomra), good fair	22.05	22.02	19.00	22.04	22.00	19.06	19.04
Hamburg (New Orleans), middling	29.04	30.05	25.09	27.02	26.03	23.03	24.06
Wool, per 100 kilograms (2.2 cwt.):							
Berlin (North German)	79.01	78.05	78.05	75.00	63.07	63.06	69.00
Bremen (Buenos Ayres), washed	104.09	101.08	99.09	95.05	87.08	82.02	86.06
Pig-iron, per 1,000 kilograms (22 cwt.):							
Berlin, from the store:							
Best Scottish cast-iron, No. 1	19.04	19.09	19.06	17.06	16.06	15.09	17.02
English (Middlebro), No. 3	15.05	16.00	15.00	13.09	12.07	12.01	13.04
Breslau, at the works:							
Puddling iron	13.08	15.07	13.02	12.09	11.05	10.03	13.00
Foundry iron	14.08	16.05	15.01	14.03	13.04	12.02	13.00
Dortmund, at the works:							
Bessemer crude iron	16.05	16.07	14.04	12.06	10.09	10.00	11.04

* September.

All producing countries were engaged in a severe struggle for an extension of their markets. That these efforts have met with some success is shown by the increased exports from Germany, France, and the United States, which latter again has given the first impulse for a favorable improvement in several industries.

A paper gives the following comparative table of exports:

[Reductions in this table have been prepared by this office.]

Year.	Germany.	Great Britain.	France.	United States.
1886	$727,560,000	$1,034,900,000	$536,900,000	$713,800,000
1885	686,680,000	1,086,550,000	595,980,000	698,100,000
1884	702,790,000	1,152,890,000	632,900,000	749,200,000
1883	778,260,000	1,164,000,000	666,230,000	795,100,000
1882	758,740,000	1,175,220,000	689,070,000	768,000,000

Comparison of German imports and exports of principal commodities in 1884 *with* 1886.

[In 100 kilograms = 2.2 cwt.]

Articles.	1886.		1885.		1884.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
Pig-iron	1,648,648	2,507,515	2,159,733	2,135,345	2,645,011	2,300,077
Scrap iron	45,786	71,746	71,229	307,040	777,090	437,084
Manufactured iron and steel	418,394	9,071,787	556,781	7,881,756	452,285	7,908,345
Rails	.....	1,632,216	.....	1,647,913	1,444,635	.....
Bar-iron	.....	1,772,929	.....	1,444,609	.....	1,539,637
Iron and steel wire	.....	2,384,971	.....	1,930,061	.....	2,127,886
Sheets and plates	.....	429,184	.....	438,961	.....	440,350
Coarse iron g	.....	600,544	.....	588,819	.....	667,889
Iron ore	8,126,348	18,316,496	8,530,066	17,711,577	9,804,423	18,984,710
Engines	15,350	79,525	21,010	68,276	24,576	99,122
Machinery	292,542	627,288	347,776	644,708	368,637	725,513
Coal	25,602,905	86,553,601	23,759,051	89,555,181	22,967,770	88,169,348

The unsettled state of Europe was a constant source of anxiety to trade and commerce during the year 1886. This condition of things had also its effect upon trade in 1887. Mere rumors of war embarrassed, to a lesser extent the classes of smaller tradesmen who are dependent chiefly upon local custom for their business than merchants whose interests extend to foreign countries.

A continued downward tendency of the rates of interest, as already stated in my last annual report, No. 85, January 10, 1887, and a still increasing predilection of capitalists for rent-bearing securities, as well as large accumulations of capital lying idle in the vaults of the banks, indicated that prospects were rather discouraging for new enterprises.

The period of conversions of domestic bonds and securities of states, provinces, and communalties continued. Dr. Stoll, in his "Conrad'schen Jahrbücher," states that up to the end of October, 1877, about 1,450,000,000 marks of first-class bonds and securities, bearing 4 and 3½ per cent. interest, had been or were about to be converted into such, bearing 3½ and 3 per cent. interest, causing to creditors an approximate loss of about 7,000,000 marks.

A stop in the steady decline of interest rates did not occur until the beginning of the year 1887, when serious apprehensions of war prevailed, and when in France, Italy, Belgium, and later in Germany, large credits were asked for war preparations.

Of 26 railroad companies reported, 20 were to pay dividends for 1886 at rates from 1 to 7½ per cent.; of 93 banks reported, 88 from 2 up to 10 per cent.; of 35 mining companies, 20 from 1 to 15 per cent.; of 117 industrial works reported, 90 paying dividends at rates from 1 to 18 per cent. (chemical factory, Schering, Berlin); on an average, 5 per cent.

Farmers, although deriving considerable advantage from the low rates of interest, had, in 1886, evidently not realized greater benefits than in previous years. They petitioned the House of Representatives for relief, which they expected to derive from the introduction of a double standard of currency, from a further increase of duties upon agricultural produce (on wool, for instance), from an increase of bounties on exported ardent spirits, and from a higher taxation of the "bourse."

The budgets of European states have in recent years assumed gigantic dimensions, yearly deficiencies being almost the rule even in the best governed states. Only Prussia, instead of again experiencing a deficit, closed her balance for the fiscal year ending March 30, 1887, with a net surplus of 16,000,000 marks in her favor. In the German Empire the decline in the revenues from sugar taxation constituted, as stated, owing to excessive export bounties, a very considerable factor in the decrease of indirect taxes. Also the amount derived from the tax on ardent spirits did by no means come up to the expectations of the Government. A legislative amendment could not be resorted to by the Imperial Government, as the majority of the Reichstag was strongly opposed to any increase of taxes, though, it seems that to a great extent party antagonism to Bismarck's policy controlled the views of the opponents. The Reichstag was therefore dissolved and a new Reichstag elected on January 14, 1887, resulting in a large majority for the Government. A comparison of the old and new Reichstags will be interesting:

Parties.	Strength of parties of late Reichstag.	New Reichstag.
Conservative	75	80 + 5
Imperial	27	39 + 12
National liberal	52	103 + 51
Total governmental parties	154	222 + 68

Parties.	Late Reichstag.	New Reichstag.
Progressive	69	32 — 37
Democratic	8	0 — 8
Social democratic	25	11 — 14
Centrum	99	90 ± 0
Guelves	11	4 — 7
Polish	15	13 — 2
Danish	1	1 ± 0
Alsatic	15	15 ± 0
Total opposition	243	175 — 68

The path was now clear for new measures of taxation. The bill for increasing the taxes upon ardent spirits and sugar was passed, as reported to the Department in No. 266, July 2, and No. 271, July 21, 1887. Another bill, which nearly doubled the duties upon agricultural products, was passed in December, also reported to the Department in No. 313, December 17, 1887.

Revenues from railroads, further declining in the first six months of 1886, experienced an upward tendency in the second half year.

In 1887 the indications for a revival of business were favorable and even a comparatively prosperous year might be recorded to-day, if constant rumors of war had not interfered and from day to day neutralized general efforts for a betterment. Consulting the "bourse," a practical improvement in mining production and in transportation of goods can be noticed. In July, 1887, a rise in prices of cotton, wool, copper, zinc, tin, pit-coal, and all sorts of iron against July, 1886, was reported and a larger export during the first eight months of 1887, against same period in 1886, of cotton goods, chemicals, iron, and zinc articles, glassware, machinery, beer, raw sugar, etc., and official returns show an improvement in the import of raw materials, such as cotton, flax, hemp, wood, copper, pit-coal, and also of cereals and petroleum.

Reserving the statement of fuller details for subsequent subdivisions of this report, viz, agriculture, mines, fisheries, commerce, means of intercommunication, etc., I shall first direct attention to some topics of a more general character, namely, Germany's social reform, emigration, and colonial policy.

SOCIAL REFORM.

No strikes of any noticeable extent took place in Germany in 1886, nor during the year 1887, although the clandestine propagation of socialistic illusions continues to pervade large classes of society. This is specially proven by the permanent increase of social democratic voters, within three years, by 40.8 per cent. Their number reached, in 1884, 549,936; in 1887, 774,128. The great majority of the working classes, however, seems impressed with the seriousness of social reform legislation, and the co-operation of employers and employés, based upon the new system of unions organized according to the chief branches of industries and trades, is looked upon with favor.

There are at present such unions—

Extending over the whole Empire	26
Extending beyond the limits of one state	24
Over one state	12

Sixty-two unions, embracing 233,144 factories and works, with 3,107,615 laborers; forty-eight executive authorities, having the same functions as the unions for factories and works belonging either to the Empire or states, with 265,088 laborers; and since January 1, 1887, 26,599 works, with 49,163 laborers, engaged in joiners' and locksmiths' establishments for buildings; making a total of 259,741 works, with 3,421,866 employés.

These "Berufs-Genossenschaften" are vested successively with magistrate powers, and with the functions of factory inspectors, charged with official supervision of the works embraced in the unions, a sort of self-government applied to trades. They may be regarded also as modern reorganization of ancient guilds.

Two social reform laws, one to insure laborers in case of disease and the other in case of accidents, are now in full operation, while a third measure, a comprehensive bill to insure working people in case of old age, is now before the Reichstag. The main object of this bill is to secure to old and invalid laborers a pension instead of making them dependent upon charity or alms of the community. It is expected that the adoption of this measure will tend gradually to relieve the commonwealth from the burden of raising taxes for the

support of paupers, in fact to abolish pauper budgets. The number of paupers relieved in Germany in 1885 is stated at 1,592,386 persons, or 3.4 per cent. of the entire population, causing to public pauper budgets an expense of 92,452,517 marks, or 1.97 marks per capita of the population.

INSURING LABORERS IN CASE OF DISEASE.

Under the German act of June 15, 1883, the number of organizations to pay relief funds to working people was, at the close of the year 1885, 18,776, with 4,294,173 members. Full information will be found in the following exhibit:

EXHIBIT B.—*Kind, number, and working of German disease funds in* 1885.

	Funds at the beginning of 1885.	Funds at the close of 1885.	Members at the beginning of 1885.	Members at the close of 1885.	Cases of disease.	Days of disease.	Property.	Revenues.	Expenditures.
Disease funds:	*Marks.*	*Marks.*	*No.*	*No.*	*No.*	*No.*	*Marks.*	*Marks.*	*Marks.*
Municipal	6,963	7,024	545,200	586,600	206,100	2,540,000	379,900	4,613,700	4,139,500
Local	3,211	3,693	1,161,200	1,534,900	617,100	8,678,000	4,798,500	21,422,000	17,465,200
Factory	5,120	5,473	1,201,400	1,261,200	643,300	8,036,000	13,404,200	25,606,500	18,434,000
Building	55	83	11,400	12,100	10,400	144,300	77,300	427,100	307,300
Guild	150	224	15,800	24,900	13,200	120,000	75,200	315,400	252,300
Other	2,012	2,279	792,200	874,500	314,700	5,782,900	7,340,800	13,715,600	12,048,500
Total	17,511	18,776	3,727,200	4,294,200	1,804,800	25,301,200	26,075,900	66,100,300	52,646,800

	Per member.						
	Cases of disease.	Days of disease.	Property.	Contributions.	Other receipts.	Expenses for cost of disease.	Other expenses.
Disease funds:	*No.*	*No.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*
Municipal	0.4	4.7	0.7	7.4	1.1	7.3	0.3
Local	0.4	5.7	3.1	12.5	1.6	9.7	1.8
Factory	0.5	6.6	10.9	16.8	4.2	14.2	0.8
Building	0.6	8.3	5.9	20.8	4.2	16.2	1.2
Guild	0.6	5.3	2.8	11.8	1.6	9.2	1.6
Other	0.4	7.0	8.8	14.4	2.1	12.9	1.6
Total	0.4	6.1	6.2	13.4	2.4	11.4	1.2

	Percentage of costs of disease, per costs for—				Per 1 disease case.	
	Physician.	Medicine and the like.	Relief and funeral money.	Nursing, cost in hospitals.	Number of days.	Amount of cost.
Disease funds:	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*No.*	*No.*
Municipal	26.1	15.5	30.2	28.2	12.3	19.3
Local	20.4	17.5	50.4	11.7	14.2	34.2
Factory	25.3	19.9	49.0	5.8	12.5	27.2
Building	22.1	10.5	36.3	31.1	14.7	28.9
Guild	16.1	11.1	51.2	21.6	8.8	15.1
Other	3.6	3.1	88.5	4.8	18.4	34.1
Total	18.8	14.9	56.8	9.5	14.1	26.4

At the end of 1885 4,264,173 persons in all, nearly one-tenth of Germany's total population, were insured in case of sickness.

LABORERS' INSURANCE IN CASE OF ACCIDENTS.

To lessen accidents to laborers while following their vocations more successful efforts have been made of late. But a still greater percentage, 54½ per cent., of accidents occurs with working people while not following their vocations. The inclosed table, marked Exhibit C, shows this very plainly in Prussia during the years 1883, 1884, and 1885 :

EXHIBIT C.—*Number of fatal accidents in Prussia during the years* 1883–'85.

Occupation where accidents occurred.	1883.		1884.		1885.	
	Total number.	In the exercise of trade.	Total number.	In the exercise of trade.	Total number.	In the exercise of trade.
Agriculture and forestry	2,576	1,348	2,711	1,332	3,022	1,425
Fishery	72	59	121	100	81	69
Mines, foundries, and salt works	1,059	908	990	861	1,099	949
Industry of stones and earths	229	139	262	167	274	149
Working of metals	210	46	221	56	238	65
Industry of machines, etc	111	47	121	63	117	49
Chemical industry	31	24	46	39	44	36
Industry of heating and illuminating stuffs	24	18	10	8	20	12
Textile industry	128	33	126	42	111	27
Paper and leather industry	58	27	60	28	61	24
Industry of wood and carving materials	206	64	189	42	200	49
Industry of articles of consumption	373	197	388	213	390	188
Industry of clothing, etc	223	10	286	18	271	19
Building trades	603	347	650	361	692	419
Polygraphic trades	11	5	11	4	12	2
Artistic trades	5	2	8	3	2	1
Commercial trades	252	95	255	79	279	110
Intercommunication	796	565	722	513	739	529
Hotels, public houses, etc	69	24	51	21	81	20
Trades for domestic purposes	1,224	246	913	184	817	191
Hygiene	4	1	9	4	13	4
Education and instruction	15	.....	12	1	32	1
Art, literature, press	3	.....	5	.....	17	3
Church and funeral service	9	2	3	.....	4	1
Administration of the Empire, states, etc	82	36	52	18	63	22
Army and navy	112	42	96	37	92	27
Other occupations	48	7	29	4	29	2
Without defined occupation	907	3	846	.....	852	.....
Total	9,440	4,295	9,198	4,198	9,652	4,393

As the most perilous occupation, appears mining ; as comparatively nearest, follow fishing and chemical industries ; then comes the building trades, the industry of heating and illuminating stuffs. No accidents occurred in the groups "Art, Literature, Press, and Church."

During the year 1886, according to the business report of the imperial insurance office, among 10,414 accidents occurring in the exercise of trade, deaths, disability, and indemnity are thus stated :

Classification.	From accidents.	
	Number.	Total indemnity.
		Marks.
Death	2,683	1,602,364
Permanent disability	1,701	10,047,807
Partial disability	3,636	10,737,108
Temporary disability	2,394	1,508,220
Total	10,414	28,485,499

The cost of imperial insurance administration is stated to be about 50 per cent. cheaper than with private insurance companies. In the latter case the cost of administration amounts to 20 to 30 per cent. of the indemnifications paid; in the former to 10½ per cent.

Taking as a basis an average amount of 750 marks as yearly wages (according to a statistical return) as average charge to the insurance association, a sum of 2,308 marks is computed in case of death; in case of permanent disability, 5,907 marks; in case of permanent partial disability, 2,953 marks; and in case of temporary disability lasting more than thirteen weeks, about 630 marks.

The cost of administration for 1886 amounted actually to 3,000,000 marks. This, compared with the total sum of indemnification above referred to, viz, 28,485,429 marks, makes precisely 10.53 per cent.

An iron work reports:

The cost of the state insurance from October 1, 1885, when the accident insurance act took effect, to December 31, 1886, amounted in all to 2,350 marks for 450 insured laborers, equalling 5 marks per person and year. The cost of a similar insurance with a Leipsic private company amounted to—

	Marks.
1883, for 420 laborers	2,184
1884, for 410 laborers	2,917
1885, for 390 laborers	4,123

Hence this iron work paid formerly more than at present, and notwithstanding the present greater cheapness every accident is indemnified, while this was formerly not the case if accidents occurred either through the fault of superiors or in consequence of defective arrangements in the work.

Accident insurance was in 1887 also introduced for seamen and all persons engaged in navigation, and for all persons employed in the building trade.

Apart from accidents, however, the official ascertainment of suicides is considered an important task of statistic research to come to correct conclusions regarding the ethical, social, and economical condition of national life.

Death occurred in consequence of suicide in Prussia:

Year.	Male.	Female.	Total.
1883	4,933	1,238	6,171
1884	4,691	1,209	5,900
1885	4,811	1,217	6,028

Concerning the motives, the statistics show that annually nearly one-third of suicides are the result of insanity; the rest must be attributed to satiety of life, physical ailments, passions, vices, grief, repentance, shame, remorse, etc. Of course, it is impossible to learn in all cases the true and often carefully-hidden motive.

On one and the same day lately, in Berlin, six persons committed suicide and one other made an attempt to take his life; on another day four suicides were reported.

Strange to say, the moral side of the question has been altogether ignored, even by the more thoughtful classes of state and society. But facts speak for themselves. A prominent writer criticizes the situation as follows:

Whoever traces objectively the causes which originated social democracy will discover that socialistic aspirations, however justifiable from a material standpoint, were from the beginning, with constantly increasing tendency, permeated by ani-

mosity against all recognized authority. Anarchism is looked upon here as well as elsewhere as the logical result of social democracy. If the lessons and teachings of the past and the great results of the moral culture of ages had not been ignored, the relations between the rich and the poor, master and servant, parent and child, husband and wife would be different from what they are to-day. When, some years ago, Büchner's "Kraft und Staff" (force and matter) appeared, the materialistic character of the book secured for it numerous new editions.

It became quite a fashion to antagonize and ridicule religious sentiment. The wealthier classes adopted the phrase, "Let us eat and drink, for to-morrow we will die;" the poorer, "Heaven has been taken from us, now let us divide what is left on earth, and if this can not be done peaceably, then by force." Social democracy received a new impetus and anarchism was preached as the gospel of the future. "*Facta loquuntur.*"

If the number of houses of worship can be considered as a criterion of the religious tendency of a community it may be stated that the great city of Berlin, with nearly 1,400,000 inhabitants, has, according to the last directory, 70 houses of worship of all denominations, mostly of moderate size, 11 of them being chapels. They are classed as follows: 37 (Landes) evangelical churches and 8 chapels; 3 French evangelical churches and 1 chapel; 3 free evangelical churches and 2 chapels; 1 Baptist church; 1 English and 1 American church; 1 Greek Catholic church; 3 Roman Catholic churches and 2 chapels, and 7 synagogues.

ADDITIONAL MEASURES TO PROTECT WORKING PEOPLE.

In June, 1886, the German Reichstag resolved upon protection of female laborers, especially those who are married, and of children. The federal council has thus far failed to give its consent, apprehending that some clauses might affect injuriously industrial pursuits in their competition with international trade.

A Berlin paper of the conservative party, which backs reform measures, writes under September 24, 1887:

The federal council will finally be compelled to pronounce upon the resolutions very considerately passed by the late Reichstag for the protection of women and children. The Reichstag in doing so has refrained from all radical measures and proposed only what, for the inauguration of a better state of things, is absolutely necessary.

The protection of labor and of the laborer is the necessary consequence of the Emperor's message, and of the chancellor's declaration that it is now time to make the requirements of practical christianity respected in the social relations. * * * To this belongs in the first line, however, the protection of women and children, the morals of the people, and of family life of the laborers. The wives at the works, the children (their parents' houses being locked) in the street, and husband and father after day's work in the rum shop, that this is ruin to the people everybody must see.

To this policy of protection of national labor must be reckoned the protection of the laborers, since the employers take undue advantage of the working power by the extension of working time and by excessive reduction of wages. The protection of Sunday rest must follow; without the same the people will be physically and morally ruined. To work against social nomadisation, people ought to be settled and inspired with love of home; the guilds reorganized and strengthened to prevent their disintegration into a migratory proletariate; the operatives associated in trades unions and settled on their own estates. Arbitration committees should be created to decide in matters of disputes on wages, to prevent strikes, which under all circumstances are detrimental both to employers and employés. * * *

The resolutions passed by the Reichstag on the 17th of June, 1886, read as follows:

From and after the 1st of April, 1890, it shall not be permitted to employ females in mines, pits, quarries, in working at the windlass near furnaces, rolling trains and hammers, in foundries, rolling and forging works, in metal and stone grinding or polishing works with machine, working at wharves, nor as carriers in buildings above ground and at building yards.

Further:

From and after the 1st of April, 1890, it shall not be permitted to employ females on Sundays or holidays, or during night from 8.30 o'clock p. m. to 5,30 a. m.

Married female laborers who have to attend to house-keeping shall be employed at works no longer than 10 hours a day.

In factories where male and female laborers are employed, a separation of sexes shall be provided for as much as possible, as well as for separate rooms for dressing and washing.

CHILD LABOR.

Children under thirteen years old shall not be employed; if older, and when still visiting school, no longer than four hours a day; if out of school, six hours; children still visiting school, during vacations, three hours.

A Plauen paper, however, says:

Reduced time for child labor would greatly injure the industries of tinware, cigars, worsted yarn, spinning, and embroidery.

STATISTICS REQUIRED AS TO LABORERS' DWELLINGS.

A short time ago the authorities concerned in Germany have been directed to report at what places and to what extent employers built dwellings for their working people, or intend to do so, with statement as to the location, size, and building condition, the number of persons tenanted, the terms of lease, etc.

BATHS FOR LABORERS.

Dr. Oscar Lassar, Berlin, in a treatise on "Volks- und Arbeiter-Bäder," points to the great advantages of public baths. Here I give only a few passages:

If everywhere associations and clubs spring into life for the culture of physical development and gymnastics, Alp, bicycle, and other kinds of clubs, why exists there no club for public baths? Lies there no happiness of life in getting relieved, after the fatigues of the working day or at the beginning of festivals, from dust and sweat and all those dirty matters through which we have to pass day after day?

If we look at the large centers of our cities, how, with powerful apparatus and without ill-placed economy of water, the cleansing of streets is effected, a sentiment of envy steals upon us that many, to whom such a thorough washing would be no less necessary, get nothing.

The sad fact that the victims of epidemics are, to the largest percentage, found among these poorer classes is, for the most part, founded on their disinclination for cleanliness. What in every-day life may be considered as a negligence becomes in epidemic times a public danger.

If there is a tendency to let working people enjoy the benefit of bathing, give them the luke-warm shower-bath. This constitutes the simplest, cheapest, and quickest form for sufficiently cleansing the body, and answers all requirements, if the body has been previously properly soaped.

Factories, where such baths were provided for their working people, experienced at once a considerable decline in the number of diseases, at first by 20 and gradually by 50 per cent. * * *

WORK ON SUNDAYS AND HOLIDAYS.

Repeated efforts of the conservative and centrum parties of the Reichstag having been made to protect working people against unscrupulous employ also on Sundays, the German Government thought proper to institute inquiry among the parties interested themselves, before taking action.

The results of a comprehensive official "enquête" have lately been submitted to the Reichstag. This statement gives the opinions of

39,269 employers, 30,651 employés, of 298 chambers of commerce and trade, of 554 guilds, of 424 trade-unions, etc.

Reports were received from 500,156 industrial establishments, employing about 1,582,591 persons. Here follow some details:

	Per cent.
Sunday work in 288,989 works	57.75
No Sunday work in 211,217 works	42.25
Sunday work for 668,027 laborers	42.25
No Sunday work for 919,564 laborers	57.75

Hence the number of works with Sunday labor is inverse in proportion to the number of laborers employed on Sundays.

According to occupation, the following figures are reported where Sunday work is customary:

	Every 100 works.	Every 100 laborers.
Large industrial works	49.4	29.8
Trades	47.1	4.8
Commerce and traffic	77.6	57.0

While the German Government is of the opinion that the Sunday laws in force are sufficient to protect laborers against excessive work on Sundays, the conservative party demands anew that all Sunday labor should be prohibited to the same extent as in the United States and in England.

EMIGRATION IN 1886.

The statistical bureau of the German Empire publishes the following figures:

Emigration took place via—

	Number.
Bremen	40,224
Hamburg	25,714
Stettin	709
Antwerp	10,040
Total	76,687

Of this number there emigrated to—

United States	72,403
British North America	330
Mexico	32
West Indies	36
Brazil	2,045
Argentine Republic	637
Peru	25
Chili	206
Other South American States	132
Africa	191
Asia	116
Australia and Polynesia	584

The largest number emigrated in—

May	11,094
April	10,442
September	8,664
October	8,560

The smallest in—

January	1,878
December	2,754

Emigration on board of 1,260 steamers and 22 sailing vessels. Of the sex of this number, 41,898 were males and 34,789 females. Concerning their age the following is reported:

	Less than 1 year.	1 to 5 years.	6 to 9 years.	10 to 13 years.	14 to 20 years.	21 to 29 years.
Males	1,699	3,172	3,047	1,546	8,199	13,225
Females	1,702	3,017	3,076	1,428	7,631	9,190
Total	3,401	6,189	6,123	2,974	15,830	22,415

	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 years and upwards.	No age given.	Total.
Males	5,878	2,673	1,520	763	170	6	41,898
Females	4,023	2,165	1,627	819	111	.....	34,789
Total	9,901	4,838	3,147	1,582	281	6	76,687

EMIGRATION IN 1887.

During the first ten months was 90,556 persons, while during same period in 1886, 70,841; 1885, 100,031; 1884, 135,090; 1883, 153,394; 1882, 179,443; 1881, 194,801 are reported as emigrants.

Comparative table showing over-sea emigration from different European states.

From—	1882.	1883.	1884.	1885.	1886.
Germany	193,869	166,119	143,586	103,642	76,687
Switzerland	10,896	13,502	8,975	6,928	6,342
Italy	67,632	70,436	59,459	78,961	87,423
Great Britain and Ireland	279,366	320,118	242,179	207,644	232,900
Denmark	11,614	8,375	6,307	4,346	6,264
Sweden	44,585	25,911	17,895	18,466	?
Norway	28,804	22,167	14,776	13,981	15,158

Of every 100,000 inhabitants during these years there emigrated—

From—	1882.	1883.	1884.	1885.	1886.
Germany	425	362	310	222	164
Switzerland	379	441	309	?	?
Italy	238	245	205	269	294
Great Britain and Ireland	792	899	673	572	634
Denmark	578	413	311	210	303
Norway	1,504	1,160	771	724	?
Sweden	975	566	389	398	?

Hence largest percentage from Norway, then follow Great Britain and Sweden.

OVER-POPULATION AND OPPORTUNITY FOR WORK.

Under this title the Deutsche Volkswirtschaftliche Correspondenz says:

It is known that a great loss of opportunity for work is caused not only by the increased productive power of the machine, but also by the increased durability of various products, for instance of steel against iron. This loss, however, is not confined to these causes alone, but it arises, also, from technical progress. To ascertain correct figures would be an interesting task for statisticians.

COLONIAL POLICY.

The colonial policy of the Empire is slowly but steadily realized. Cameroons, for instance, exported in 1886 1,924 tons of palm-nut oil; 1,697 tons of palm-nut kernels; 6,536 kilograms caoutchouc; 8,372 kilograms ivory; 1,521 kilograms cacoa. Official figures show for the Cameroons 178,000 marks expenditures; 167,000 marks revenues; 11,000 marks deficiency. For the Tago land: 94,000 marks expenditures; 76,000 marks revenues; 18,000 marks deficiency.

In those two German protectorates an order has been issued for the imposition of import duties on ardent spirits.

The late Reichstag appropriated a subsidy of 150,000 marks for the encouragement of scientific pursuits towards the opening and exploration of Central Africa, especially the back country of the Cameroons.

The New Guinea Company received by imperial ordinance of July 20, 1887, the right to acquire and encumber, etc., real estate. One of their expeditions has been, as papers report, crowned with complete success. Numerous harbors have been discovered, and it was found that the "Augusta River" opened a clear route into the interior. It is deemed a good field for establishing a German colony. The country is said to be rich in minerals; even gold has been found in several places, as has been the case also in "Lüderitz Land" (Angra Pequeña, Southwest Africa, on the Swakop River, about 70 miles from Walfish Bay).

The German West African Company has, since the beginning of 1887, purchased goods of a total value of 100,000 marks intended for West African trade. About 100 German firms have been engaged in the delivery of these goods, sent out with the company's first expedition, in March, 1887. The total inventory of the company represents a value of 180,000 marks, inclusive of 80,000 marks for buildings, slaughter-house apparatus, machines, tools, freight trucks, draught oxen, horses, boats, etc. All sorts of trades and professions are engaged. A soap and candle factory is to be established; glue-boiling works, fishing and whale-catching, and a raw india-rubber work are also contemplated. A guano factory is already in full operation.

Of the East African Company, according to the last report, their stations have not yet been permanently established, but steps have been taken to erect buildings. There are at present thirteen of such stations which, in the first place, are to serve for agricultural and trading purposes; and, secondly, for administrative and political ends. Six of them may be regarded as plantations proper—three on the Kinparu (Dunda, Madimole, Hongula); one in Pengam, one in Kingaru (Usanbara), and one in Petershöhe. The stations Upnaprova (Usegara) and Anisila (Kilima-Ndscharo) are intended for cattle-breeding and colonization. At the Kingaru station about 100 morgen (1 morgen = $\frac{5}{9}$ acre) of forest have been cut and cleared, and here European vegetables of all descriptions have been grown; also maize, rice, bananas, vanilla, tobacco, cotton, etc. There are stations where about 300 native laborers work per day at 9 to 10 marks monthly wages. They are said to be quick in comprehension and will before long prove able to acquire the art of cultivation. If this be the case the main difficulty is overcome, since there are thousands of square miles of excellent land of different kinds.

OBJECTS OF GERMAN COLONIAL POLICY.

Professor von Stengel, Breslau, defines them as follows:

It is true that Germany, appearing too late to acquire colonies, will find but little masterless land fit for agricultural settlements, perhaps excepting some districts of the dominion of the East African Company, and in the interior of the Southwestern African protectorate, and that therefore it will not be possible to direct the flow of German emigrants into German farming colonies. In the main Germany will, therefore, have to confine herself to the establishing of trading and plantation settlements. Such colonies forming solid points of support for German over-sea trade, will contribute considerably to expand the market for German manufactures.

The South American Colonization Company of Leipzic has acquired large tracts of arable land in Paraguay, and intends to settle industrious German colonists and invest sufficient capital to make a profitable living for many thousands of Germans.

CONSULAR CORPS FOR 1887.

This consists of 705 officers, among which there are only 73 consules missi.

Salaries paid to the latter	$497,170
Clerk hire	74,256
Contingent expenses	153,272 / 14,280
Reserve fund	11,900
Expense	768,014

Besides this $28,274 are appropriated for imperial officers within the German protectorates, Cameroons, Toga land, and Southwest Africa.

The Seminary for Oriental Languages was opened on the 18th of October, 1887, at Berlin. The instruction embraces:

(1) Languages: Chinese, Japanese, Hindostan, Arabian, Persian, Turkish, and Suahelian. In connection with these languages instruction shall be given as to religion, customs, and usages, geography, statistics, and modern history of the territory where the language concerned is spoken.

(2) The scope of such instruction is: (*a*) Knowledge of grammar and of that part of the vocabulary which occurs in every-day life, orally and in writing; (*b*) practice of speaking and writing the language; (*c*) acquaintance with papers and documents, of both public and private character, chiefly used; (*d*) directions how to become familiar with the country and people.

Thus far 115 gentlemen have been matriculated, about 40 law students and 40 merchants. Arabian, Chinese, Japanese, and Turkish classes are best attended.

AGRICULTURE.

As appears from the preamble of the bill, now enacted, to amend the German customs tariff, the confederate governments and the Reichstag, in 1885, when first amendment to the tariff was passed, cherished the hope that the rates of duty then increased on cereals would secure such protection and compensation as was considered necessary to compete successfully with foreign countries working under more favorable conditions. This expectation was not realized. The decline of prices of cereals continued, and, regardless of increased rates of duties, reached an extent endangering Germany's grain-tilling and the basis of her farming.

Within the Prussian State the prices are:

[Marks per 1,000 kilograms, or 22 cwts.]

	Wheat.	Rye.	Barley.	Oats.
On a twelve years' average (1867 to 1878)	22.7	17.7	16.5	15.9
On a four years' average (1879 to 1882)	21.1	17.5	15.9	14.7
1883	18.5	14.7	14.6	13.7
1884	17.3	14.7	14.9	14.4
1885	16.2	14.3	14.3	14.3
1886	15.7	13.4	13.5	13.3
September, 1887	15.4	11.5	12.5	10.6

On the other hand, costs of production have not experienced a reduction corresponding to the decline of prices, such as wages, taxes, imposts. A chamber of trade says:

Abundant and good crops of recent years have thus far veiled a calamity; the easy opportunity to procure money, the low rates of interest, have delayed a catastrophe which infallibly must come, if disturbed times affect the money market and difficulties in the money market compel business men to collect their claims. It is an unfortunate fact that a large amount of working capital required for improved methods of cultivation, by business men is placed at the disposal of farmers in the form of credit for cattle, for food, manure, for machines and implements. * * * Detailed calculations of experienced and reliable agriculturists rate the self-cost of production of a wispel (86 imperial bushels) of wheat, at 155 to 172 marks ($36.89 to $40.93), while the market price only a short time ago went up to 160 to 165 marks, ($38.08 to $39.21), after having for a long time fluctuated between 145 to 148 marks ($34.51 to $35.22).

In case of rye another agriculturist gives the following comparative table as to the proportion of gross and net produce of the same acre:

[In scheffels, 1.5 imperial bushels.]

Gross produce of grain per morgen (⅔ acre).	Cost absorbing.	Net produce.	Percentage of net produce to the gross produce.
4	3.8	0.2	5
5	4.0	1.0	20
6	4.2	1.8	30
7	4.4	2.6	37
8	4.6	3.4	42
9	4.8	4.2	47
10	5.0	5.0	50
11	5.2	5.8	53
12	5.4	6.6	55

Not until 4 scheffels (6 imperial bushels) are obtained as produce are costs covered in Germany. According to statistical returns 7 scheffels are the average produce of German rye-fields. In case of such an average crop, according to the above statement, 37 per cent. of the gross produce would remain as net proceeds.

Public sales of real estate in Prussia during 1881 *to* 1886.

	1881.	1882.	1883.	1884.	1885.	1886.
Number of sales	17,473	16,197	13,573	10,528	10,309	10,500
Area of estates sold, in hectares	106,957	86,277	82,898	79,268	88,067	108,459
Estimate of usufruct liable to ground tax, in thousands of marks	7,902	6,163	5,322	4,476	3,988	3,841
Of which served chiefly for farming and forestal purposes	9,855	8,583	7,162	5,731	5,806	6,096
Percentage	56.4	53.0	52.8	54.4	56.3	57.4

It is stated that the number of public sales would have been still greater if the so-called "Prussian subhustation act" of July 13, 1883, had not served as an impediment of such sales.

Mortgaged debts on Prussian real estate may (according to G. Ucke, in the Jahrbücher für National-Ökonomie und Statistik) have amounted in the years—

	Marks.
1800	150,000,000
1805	162,000,000
1835	324,000,000
1865	516,000,000
1884	1,281,000,000

Imports of breadstuffs into the German Zollverein in the years 1884 *to* 1886.

[In 100 kilograms, 2.2 cwts.]

Articles.	1886.	1885.	1884.
Wheat	2,727,966	5,724,233	7,545,117
Rye	5,625,690	7,697,007	9,615,596
Barley	3,538,414	4,380,360	4,400,800
Oats	810,289	2,180,830	3,664,127
Pulse	398,780	527,792	557,101
Maize	1,693,417	1,963,211	1,920,015
Malt	663,155	643,936	656,462
Imported from the United States.			
Wheat	165,346	287,680	722,330
Rye	32,983	91,610	140,005
Barley	1,489	2,070	8,420
Indian corn	183,885	415,000	3?2,560
Imported from Russia.			
Wheat	1,416,877	2,747,746	2,084,095
Rye	3,279,615	2,895,079	3,678,077
Barley	446,117	726,203	545,842
Imported from Austria-Hungary.			
Wheat	438,783	320,783	479,061
Rye	20,297	100,514	121,467
Barley	1,923,472	1,087,152	1,954,337

From East India.

(*a*) DIRECT IMPORTED WHEAT.

Year.	Quantity.	Year.	Quantity.
1880	42	1884	21,916
1881	1,520	1885	139,013
1882	2,970	1886	.....
1883	4,144		

(*b*) INDIRECTLY IMPORTED WHEAT.

Year.	Via Belgium.	Via Netherlands.	Year.	Via Belgium.	Via Netherlands.
1880	158,189	85,006	1883	602,346	309,545
1881	279,156	130,006	1884	918,943	774,484
1882	530,776	180,100	1885	430,176	604,122

The import of cereals from Russia exceeded considerably that from Austria-Hungary and the United States, especially in wheat. The exportation of German cereals, however, is steadily decreasing.

Dr. Franke, in his official publication (Acht Jahre deutschen Getreidehandels, 1878–'85), says with regard to this subject:

Decreased exports of German cereals, increased import of foreign grain, and with all these receding prices, show evidently the calamity from which German farmers suffer.

As to the competition of Russian rye with the German product in German markets a paper compares the cost of production in Russia and East Germany. In eastern provinces the average wages of an agricultural laboring couple—husband and wife—are moderately rated at 1.65 marks (37 cents) per day; in Russia about 25 kopecks (19.4 cents). Now, the price for rye being at present 114 marks ($27.13) per ton (1,000 kilograms), such market price corresponds with wages of a laboring couple for sixty-eight and two-third days.

Suppose a similar relation existed in Russia, the value of production for the farmer would be, per 1,000 kilograms rye, 68⅔ by 25 kopeck, or 17 rubles 16⅔ kopeck ($13.35). But under the real relation of value these 17.16 rubles mean to the Russian producer 30.5 rubles ($23.82), so that he receives for 1,000 kilograms rye, 121.6 times as much as the wages of a working couple amounts to, while the German producer can obtain only 68.6 times as much.

A detailed statement as to cost of production of wheat and rye is given by Dr. Jaeger in his Agrarfrage der Gegenwart, 1884, for Palatinate (Bavaria), as follows:

	Marks.
One day's work, field (three days' work, or 1 hectare), has a value of 900 marks; interest thereon, 5 per cent	45.00
Taxes and imposts	2.50
6½ cars of manure (first year), 3.30 marks each	22.10
Fare (manure) each car, 70 pfennigs	4.55
Spreading of manure	0.70
Three times plowing, each 4 marks	12.00
Seed (125 pounds) less 100 kilograms, at 22 marks	13.75
Corn-house rental	3.00
Cutting and mowing wheat	6.00
Binding	2.00
Fare to barn	2.00
Helpers in unloading	0.30
Thrashing, 3 men two-and-half days each, 1.70 marks	12.75
Sundries	2.50
Total	129.15
Yield of straw, 16 cwts. each, 1.50 marks	24.00
Total expenses	105.15
Yield of crop, 180 sheaves of wheat; result of thrashing, 10½ cwts. each, 11 marks	115.50

This amount divided by the quantity of grain obtained, viz, 10-5 cwts., we arrive at an average price per cwt. of round 10 marks ($2.38). In case of rye, 9.00 marks ($2.11) may be taken.

In comparing this result with the prices obtained by the farmer in the Palatinate, viz, 14.90 marks ($3.54) per 100 kilograms wheat, or 7.45 marks ($1.77) per cwt., we see that farmers actually sustain a loss; for the higher prices paid in the large centers of trade, say Berlin, viz, 14.90 marks ($3.54), wheat, and 11.50 marks ($2.73), rye, only benefit the wholesale dealer.

INCREASED DUTIES ON CEREALS.

All such complaints have of course urged the German Government to increase the duties on cereals, resulting in the enactment of the amended tariff, approved December 21, 1887. The duty was thereby raised as follows:

Articles.	Former tariff.	New tariff.
Wheat ..... per 100 kilograms...	$0.71	$1.19
Rye ..... do	.71	1.19
Oats ..... do	.35½	.95
Barley ..... do	.35½	.53½
Maize ..... do	.23½	.476
Malt ..... do	.71	.95
Amyline, toilet powders, starch, gum, gluten, arrowroot, etc ..... do	2.14	2.97
Vermicelli, macaroni ..... do	2.38	3.21
Mill products ..... do	1.78½	2.49

But farming circles regard even this increase of duty only as an installment, while social democracy indicts the measure as an injury to the working people.

On January 21, 1888, quotations were as follows, at Berlin, according to quality per 1,000 kilograms (2.2 cwts.).

Articles	Value.
Wheat	$37.12 to $39.98
Rye	27 37 to 29.03
Barley	23.80 to 44.60
Oats	26.42 to 28.08

As to the effect of duties on breadstuffs and price on bread an economical paper publishes the following figures:

Year.	Cost of flour used for 1 kilogram bread.	Difference between this price and the price for 1 kilogram of bread.
	Pfennigs.	*Pfennigs.*
1878	16.2	4.3
1879	16.7	3.2
1880	22.3	2.6
1881	28.2	3.5
1882	18.6	4.2
1883	18.3	4.2
1884	17.3	4.2
1885	17.0	4.2

This table was to show that the profit of the contractor falls and rises with the price of the raw material, and that the finished product did not undergo equally great fluctuations. The baker, like all retailers, a paper adds, tries to maintain the same level, once reached, of the selling price, without regard to the wholesale price of raw material. In doing so he is assisted by the public being used to the existing prices. A price-list of cereals for a number of recent years will be found in Exhibit A.

CROP IN 1886.

The crop is shown in Exhibit D, and quantities of cereals harvested, imported, exported, used as seed, and left for consumption, in Exhibit E:

EXHIBIT D.—*Principal crops harvested in the German Empire in the years* 1878–'79 *and* 1886–'87.

[1 hectare, 2½ acres; 1 ton, 22 cwt.]

Articles.	Area under cultivation in 1886.	Quantity harvested, in tons.		Quantity harvested per 1 hectare, in tons.	
		Average in years 1878–'79.	1886.	Average in years 1878–'79.	1886.
Wheat	1,916,633	2,409,097	2,666,423	1.30	1.39
Rye	5,338,902	5,763,074	6,092,849	0.98	1.04
Barley	1,731,480	2,185,270	2,337,206	1.31	1.35
Oats	3,806,535	4,262,245	4,855,894	1.14	1.28
Spelt	372,531	462,217	441,440	1.21	1.18
Buckwheat	215,561	145,112	129,876	0.62	0.60
Peas	406,526	363,175	314,121	0.81	0.77
Potatoes	2,715,747	22,800,456	25,143,029	8.06	8.62
Hops	47,371	24,435	30,203	0.57	0.64
Wine	120,301	*2,426,256	*1,503,072	*20.31	*12.50

*1 hectoliter, 22 gallons.

EXHIBIT E.—*Quantities of cereals and potatoes harvested, imported, exported, used as seed, and left for consumption.*

[In tons of 22 cwt.]

Year.	Rye.	Wheat.	Barley.	Oats.	Potatoes.
Crops:					
1882	6,390,407	2,553,447	2,256,355	4,508,056	18,069,332
1883	5,600,068	2,350,878	2,131,202	3,718,469	24,906,431
1884	5,450,992	2,478,853	2,229,598	4,236,665	24,019,601
1885	5,820,095	2,599,271	2,260,645	4,342,357	27,953,643
1886	6,092,849	2,666,423	2,337,206	4,855,894	25,143,029
Imported for consumption:					
1882–'83	541,390	723,886	433,735	169,337	33,299
1883–'84	843,690	499,365	426,486	405,026	26,007
1884–'85	842,122	780,671	583,683	293,406	51,194
1885–'86	432,043	146,456	397,690	109,334	26,694
1886–'87	428,827	222,775	421,060	88,277	36,164
Exported:					
1882–'83	19,221	145,987	100,315	46,513	397,412
1883–'84	7,284	63,953	52,777	22,449	178,919
1884–'85	4,763	32,838	43,780	14,098	110,035
1885–'86	3,840	19,335	24,962	16,526	163,715
1886–'87	3,227	11,098	69,539	13,029	188,225
Total amount at disposal:					
1882–'83	6,912,576	3,131,346	2,589,775	4,631,380	17,705,219
1883–'84	6,436,474	2,786,290	2,503,911	4,101,646	24,753,519
1884–'85	6,288,351	3,226,716	2,769,501	4,515,973	23,960,760
1885–'86	6,248,298	2,726,372	2,633,373	4,435,165	27,819,622
1886–'87	6,518,449	2,878,100	2,688,727	4,931,142	25,040,968
Quantity for seed:					
1882–'83	834,844	304,303	236,883	596,114	5,531,093
1883–'84	818,770	332,646	252,666	599,556	5,812,525
1884–'85	992,260	328,744	261,437	604,111	5,815,260
1885–'86	991,455	327,812	262,079	605,487	5,832,667
1886–'87	998,587	328,293	260,869	610,234	5,831,493
Balance for consumption:					
1882–'83	6,077,732	2,827,043	2,352,892	4,035,266	12,174,126
1883–'84	5,617,704	2,453,644	2,251,245	3,502,090	18,940,994
1884–'85	5,296,091	2,897,972	2,508,064	3,911,862	18,145,500
1885–'86	5,256,843	2,398,560	2,371,294	3,829,678	21,986,955
1886–'87	5,524,912	2,549,807	2,427,858	4,320,908	19,209,475

CROP IN 1887.

In a Vienna publication (Rundschau für Geographie und Statistik the crop of wheat for 1887 is stated to be as follows:

Country.	Produce.	Required import.
	Hectoliters.	*Hectoliters.*
Germany	40,000,000	6,500,000
Switzerland	600,000	3,400,000
France	110,000,000	20,000,000
England	25,600,000	41,500,000

While in grain-producing countries of a more favorable situation the relation is as follows:

Country.	Produce.	Exporting efficiency.
	Hectoliters.	*Hectoliters.*
Russia	90,000,000	28,000,000
Hungary	47,000,000	14,000,000
Roumania	8,500,000	4,500,000
India	82,000,000	10,000,000
United States	145,000,000	35,000,000

THE AGRICULTURAL COMPETITION OF NORTH AMERICA AT PRESENT AND IN FUTURE, BY PROF. MAX SERING.

Prof. Max Sering, of Bonn, lately visited the United States for the special purpose of informing himself in regard to our country's agricultural development. In a book just published, "Die Landwirthschaftliche Concurrenz Nord-America's in Gegenwart und Zukunft (the agricultural competition of North America at present and in the future), the professor reviews with much care the condition of agriculture in the United States, and comes to the conclusion that, notwithstanding contrary arguments and the greater difficulties at present encountered in America (and he criticises severely our land policy and the acquirement of great tracts of land by capitalists and railroad companies), American competition, after all, must be looked upon as controlling the grain market of the world.

The professor states that it is true that the competition of America as far as Germany is concerned, has become more and more insignificant. America supplied in 1881 more than 31 per cent. of German wheat import, to which must be added 17 per cent. credited to Belgium, Holland, Hamburg, and Bremen. In 1886 the amount was reduced to 6 per cent. of direct import and 20 per cent. from Belgium, Holland, Hamburg, and Bremen, which doubtless embraced less of the American product than in 1881. The direct participation of Russia, which was 24 per cent. in 1880, increased to nearly 52 per cent. in 1886, chiefly the result of lower freight rates; even at Mannheim, in South Germany, Russian wheat can be sold cheaper than the wheat coming from the West of America. Besides the increase of Russian imports, rich harvests in Germany have, within the latter years, decreased American imports. But he thinks American production controls chiefly price quotations, owing to its influence upon the most important grain market of the world—England. This

country uses continually about seven-tenths of America's export. Not only those countries which need supply but also those which have to spare are controlled by the quotations of the English market.

The professor does not feel inclined to favor the present tariff system in Germany as applied to grain, and comes to the conclusion that in agricultural industry and in the business adaptation of the same to the requirements of the market, Germany is behind America. Much could yet be done here to increase production, and thus improve farming interests.

PRUSSIAN CROP IN 1887.

Official returns had not yet been published for the whole German Empire.

The Prussian crop in 1887, compared with that in 1885 and 1886, taking 100 as an average crop, is as follows:

Articles.	1885.	1886.	1887.
Wheat	98	95	102
Rye	91	87	100
Barley	93	97	94
Oats	91	101	85
Pulse	93	94	91
Potatoes	98	98	89

But in spite of a comparatively good crop the farmers are not hopeful of an improvement of their situation, since the prices of grain and cattle are so low that only in exceptional cases they can work with profit.

Development of prices and the money value in the course of the Middle Ages and modern time have recently been shown in an interesting publication compiled from the archives of a large landed manorial estate in Silesia.

Since the years 1631–'50 up to the present time, prices of cereals rose in that country by 250 per cent.; of meat and animal products (in weight), by 500 per cent.; industrial articles, however, only by 150 per cent. in value. Colonial goods fell to 50 per cent. of the price.

The wages on those estates for artisans and day-laborers amounted, in silver value (taking 100, as now-a-days, average wages, and including more important categories of laborers, to arrive at an average), during the following years:

Years.	Per cent.	Years.	Per cent.
1631 to 1650	52.3	1771 to 1790	50.1
1651 to 1670	49.6	1791 to 1810	52.5
1671 to 1690	47.6	1811 to 1830	57.7
1691 to 1710	43.9	1831 to 1850	56.7
1711 to 1730	43.5	1851 to 1870	76.8
1731 to 1750	51.1	1871 to 1880	100.5
1751 to 1770	46.7	1881	100.0

Taking these percentages to be pfennigs, we may have an approximate idea of what amount of wages less able or inferior male laborers received. The average wages nowadays on those estates are 180 pfennigs for artisans; for male day laborers, 110 pfennigs; for female, 75 pfennigs.

From the above figures, compared with the development of corn prices stated, it is apparent that the condition of the working classes in Silesia since the second quarter of the last century was still worse than formerly, and not until the middle of this century a considerable increase of wages has taken place—another circumstance to be placed to the farmer's debit.

TOBACCO CROP IN 1886–'87.

The area under tobacco cultivation in Germany has gradually decreased during recent years. While in the year 1881 there were 27,248 hectares producing tobacco, the area of tobacco plantations amounted in 1886 only to 19,843 hectares.

Number of tobacco planters		176,718
Number of tobacco plantations		246,777
Yield	kilograms..	88,645,758
Average per hectare (2½ acres)	do....	1,948
Average price per 100 kilograms ($18.64)	marks..	78.34
Against in the preceding year ($18)	do....	75.62
Total value of tobacco crop:		
1886–'87 ($7,205,628)	do....	30,275,751
1885–'86 ($6,938,176)	do....	29,152,040

Information as to revenues from tobacco will be found in Exhibit F for years 1881–'86.

EXHIBIT F.—*Revenues from customs and taxes levied upon tobacco within the German Follverein.*

Harvest year (July 1 to June 30).	Amount of tobacco-tax collected, less drawbacks.	Tax on substitutes of tobacco	Duty of entry on tobacco.	Total amount of taxes and duties.	Bounties on exportation.			Net proceeds of revenues from tobacco.	
					Tax repaid.	Duty repaid.	Total.	Total.	Per capita.
1881–'82	$2,770,400	$3,600	$5,960,300	$8,734,100	$3,009	$4,900	$8,400	$8,726,400	.19
1882–'83	2,022,800	4,400	5,775,500	7,802,700	7,200	28,100	35,300	7,767,300	.17
1883–'84	1,996,600	4,900	6,874,100	8,875,700	16,600	52,300	69,000	8,806,700	.19
1884–'85	2,491,000	5,200	7,798,500	10,294,200	145,400	84,300	229,990	10,064,300	.22
1885–'86	2,512,100	5,200	8,171,300	10,688,600	125,000	110,200	235,400	10,454,000	.23

WINE.

In 1886 Germany's wine districts harvested 1,503,072 hectoliters. The dreaded foe of vintage, the phylloxera having made its appearance in 1885, also in the German vineyards, has caused to the Prussian Government an expenditure of 448,000 marks for the last fiscal year. At attempt to destroy the phylloxera by a manuring preparation has been a failure.

A company for the production of cognac exists at Cologne; it is said that the company produces cognac quite equal to French cognac. According to the official tests at Berlin the product is found to be everything that is desired in a hygienic respect, and to possess all of the good qualties of the unadulterated French liquor.

HOPS AND BEER.

Germany produced in 1886, 30,203 tons (about 660,000 cwts.).

According to Dr. Pott, the total production of hops in the world amounted, in 1887, to 1,640,450 cwts., and the consumption to 1,721,000 cwts. If these figures are accepted, it is clear that in 1887 there was an underproduction of 80,550 cwts., or 47 per cent.; in 1886, however, there was an overproduction of 17.5 per cent. Under these

circumstances the decline in prices for all ordinary sorts (15 to 22 mark per cwt.) is easily explained.

Production of beer will be shown in Exhibits G, H, and I, and revenues from beer in K.

EXHIBIT G.—*Quantity of beer produced within that portion of the Empire (excluding Bavaria, Wurtemberg, Baden, Alsace-Lorraine) which has a brewing-tax system in common.*

[Ton, 22 cwt; 1,000 hectoliters, 2,200 gallons; kilogram, 2.2 pounds; liter, 1.76 pints.]

Fiscal year.	Breweries		Quantity of brewing materials liable to tax.	
	In operation.*	Working for trade.	Grain.	Substitutes.
1881–'82	11,266	10,068	430,100	2,282
1882–'83	10,921	9,797	446,928	2,261
1883–'84	10,703	9,625	472,573	2,466
1884–'85	10,520	9,461	493,281	2,843
1885–'86	10,365	9,326	487,501	3,045

Fiscal year.	Quantity of beer produced.				To obtain 1 hectoliter of beer there were used, together with each other, on an average of—	
	Upper fermented beer.	Lager beer.	Total.	Per capita.	Malt of grain and rice.	Substitutes.
	Hectoliters.	*Hectoliters.*	*Hectoliters.*	*Liters.*	*Kilograms.*	*Kilograms.*
1881–'82	7,813.8	13,502.2	21,316.0	62	20.19	.09
1882–'83	7,901.2	14,212.0	22,113.2	64	20.23	.09
1883–'84	8,071.5	15,320.4	23,391.9	67	20.22	.08
1884–'85	8,384.2	16,229.2	24,613.4	70	20.07	.09
1885–'86	8,081.2	16,209.5	24,290.7	68	20.09	.10

* Inclusive of so-called "house-breweries" working only for own private consumption.

EXHIBIT H.—*Manner and extent of brewing within that portion of the Empire (exclusive of Bavaria, Wurtemberg, Baden, Alsace-Lorraine) which has a brewing-tax system in common.*

CHIEFLY MANUFACTURED.

Fiscal year.	Upper fermented beer.		Under fermented beer.	
	For trade.	For own private consumption.	For trade.	For own private consumption.
1881–'82	6,808	1,197	3,260	1
1882–'83	6,571	1,111	3,238	1
1883–'84	6,454	1,077	3,171	1
1884–'85	6,389	1,051	3,092	1
1885–'86	6,229	1,038	3,097	1

PAID BREWING TAX.

Fiscal year.	Up to 15 marks.	More than 16 to 60 marks.	61 to 300 marks.	301 to 600 marks.	601 to 1,500 marks.	1,501 to 6,000 marks.	6,001 to 15,000 marks.	More than 15,000 marks.
1881–'82	2,083	1,085	2,609	1,460	1,877	1,587	376	189
1882–'83	1,955	1,024	2,509	1,432	1,833	1,577	392	199
1883–'84	1,948	1,004	2,353	1,398	1,769	1,609	403	219
1884–'85	1,894	958	2,228	1,350	1,825	1,622	400	213
1885–'86	1,853	918	2,136	1,352	1,794	1,648	424	238

EXHIBIT I.—*Total beer production in the German Empire.*

[1,000 hectoliters, 2,200 gallons; liter, 1.76 pints.]

Fiscal year.	Beer produced in—				
	Bavaria.	Wurtemberg.	Baden.	Alsace-Lorraine.	Remainder German Empire.
	Hectoliters.	*Hectoliters.*	*Hectoliters.*	*Hectoliters.*	*Hectoliters.*
1881–'82	12,341.6	3,247.7	1,188.8	941.4	21,316.0
1882–'83	12,112.6	3,041.9	1,167.2	815.6	22,113.2
1883–'84	12,265.4	3,063.8	1,220.7	823.3	23,391.9
1884–'85	12,608.5	3,027.6	1,235.8	801.7	24,613.4
1885–'86	12,665.7	2,878.8	1,244.5	690.7	24,290.7

Fiscal year.	Amount per capita.				
	Bavaria.	Wurtemberg.	Baden.	Alsace-Lorraine.	Remainder German Empire.
	Liters.	*Liters.*	*Liters.*	*Liters.*	*Liters.*
1881–'82	232	165	76	60	62
1882–'83	226	154	74	52	64
1883–'84	228	156	78	53	67
1884–'85	234	152	78	51	70
1885–'86	234	144	78	44	68

EXHIBIT K.—*Amount of brewing tax collected in the different brewing-tax territories of the German Empire.*

Fiscal year.	Bavaria.		Wurtemberg.		Baden.		Alsace-Lorraine.		Remainder of the German Empire.	
	Gross receipts.	Tax per hectoliter.	Gross receipts.	Tax per hectoliter.	Gross receipts.	Tax per hectoliter.	Gross receipts.	Tax per hectoliter.	Gross receipts.	Tax per hectoliter.
				Cents.		*Cents.*		*Cents.*		*Cents.*
1881–'82	$7,169,500	$1.21	$1,777,000	73	$944,400	49	$432,000	24	$4,503,700	13
1882–'83	6,895,100	1.20	1,713,600	72	925,100	49	384,400	23	4,664,800	13
1883–'84	7,936,000	1.20	1,742,600	73	949,400	49	401,700	24	4,949,900	14
1884–'85	7,063,100	1.20	1,733,100	73	972,500	49	411,000	24	5,198,600	15
1885–'86	7,159,500	1.19	1,671,000	72	979,600	49	373,500	23	5,259,300	15

DISTILLED SPIRITS.

The production of distilled spirits is shown in Exhibit L, and revenues in Exhibit M.

EXHIBIT L.—*Number, kind, and amount of production of still-houses in operation during the fiscal years from* 1881–'82 *to* 1885–'86; *Bavaria, Wurtemberg, and Baden not included.*

Fiscal year.	Still-houses operated.	Number manufacturing yeast.	Number of still-houses using—			
			Farinaceous materials.		Molasses.	Other not farinaceous materials.
			Potatoes.	Grain.		
1881–'82	29,909	1,294	4,497	2,759	24	22,629
1882–'83	28,201	1,316	4,180	2,937	17	21,067
1883–'84	32,518	1,327	4,306	2,935	19	25,258
1884–'85	30,409	1,340	4,303	2,902	22	23,182
1885–'86	33,892	1,343	4,252	2,932	18	26,690

Still-houses working farinaceous paid whisky tax.

Fiscal year.	Total number.	Up to 300 marks.	300 to 1,500 marks.	1,501 to 6,000 marks.	6,001 to 15,000 marks.	More than 15,000 marks.
1881–'82	7,280	921	1,461	2,086	1,370	1,492
1882–'83	7,134	895	1,384	2,033	1,463	1,359
1883–'84	7,260	924	1,454	2,007	1,507	1,368
1884–'85	7,227	895	1,440	2,006	1,480	1,406
1885–'86	7,202	833	1,435	1,978	1,326	1,610

EXHIBIT M.—*Revenues from taxes on whisky and other spirituous liquors collected in that part of the German Empire which has a whisky-tax system in common (excluding Bavaria, Wurtemberg, and Baden).*

Fiscal year.	Gross receipts from whisky tax.	Duty on spirituous liquors imported from Bavaria, Wurtemberg, and Baden.	Duty on brandies imported from foreign countries.	Total gross receipts from all taxes and duties.	Bounties and drawbacks.*	Net receipts from taxes and duties.	
						Total.	Per capita.
							Cents.
1881–'82	$15,232,600	$28,600	$456,400	$15,718,400	$4,173,000	$11,545,400	32
1882–'83	14,000,200	28,400	469,900	14,499,300	3,559,300	10,940,000	29
1883–'84	14,560,000	27,200	500,100	15,088,100	3,447,100	11,641,000	32
1884–'85	14,859,600	30,700	1,148,200	16,039,200	3,405,700	12,733,500	34
1885–'86	15,672,700	24,700	472,900	16,171,300	4,249,400	11,921,800	24

* For spirituous liquors either exported or used for technical purposes.

As to the efficacy of the new act, providing for a new method of taxation on ardent spirits, of June 24, 1887, the following official figures were recently published for the months of October and November, 1887, the time for which the new act was in operation:

Mashing tax	marks..	5,874,682
Excise (consumption) tax	do	6,682,021
After tax on stocks on hand	do	21,804,433
Bounties	do	3,292,447
Production	liters..	40,359,065
Consumption	do	11.137,661
Stock on hand	do	72,681,000

BEET SUGAR.

EXHIBIT N.—*Beet-sugar production in the German Zollverein, years* 1881–'82 *to* 1885–'86.

[Ton, 22 cwt.; pound, one-half kilogram; 100 kilograms, 2.2 cwt.]

Year.	Factories in operation.	Factories obtaining juice by—		Beets worked.	Produced by the factories.		Quantities obtained.		
		Diffusion.	Pressing centrifugal filter maceration.				Filling mass.	Raw sugar product of all kinds.	Molasses.
				Tons.	*Tons.*	*On acres.*	*Tons.*	*Tons.*	*Tons.*
1881–'82	343	324	19	6,271,948	3,431,754	303,140	774,004	599,722	150,813
1882–'83	358	343	5	8,747,154	4,448,632	323,155	1,097,508	835,165	196,305
1883–'84	376	368	8	8,918,130	4,205,064	352,107	1,216,879	940,109	207,978
1884–'85	408	402	6	10,402,688	4,936,246	375,193	1,448,619	1,123,030	259,700
1885–'86	399	395	4	7,070,317	4,199,047	347,173	1,025,777	808,105	180,178

EXHIBIT N.—*Beet-sugar production in the German Zollverein, &c.*—Continued.

[Ton, 22 cwt.; pound, one-half kilogram; 100 kilograms, 2.2 cwt.]

Year.	Obtained from 100 kilograms of taxed beets.			Obtained from 100 kilograms.		Quantities of beets required to obtain 1 kilogram (=2.2 pounds) of raw sugar.
	Filling mass.	From the filling mass.		Raw sugar.	Molasses.	
		Raw sugar.	Molasses.			
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
1881–'82	27.14	21.03	5.28	170.45	42.86	23.01
1882–'83	27.61	21.01	4.92	167.42	39.35	23.03
1883–'84	27.30	21.06	4.66	154.50	34.18	18.98
1884–'85	30.64	23.73	5.50	170.54	39.44	20.24
1885–'86	31.92	25.14	5.61	173.31	38.63	19.25

By German act of July 9, 1887, a new mode of taxation was adopted (as reported in dispatch No. 271, dated July 26, 1887); to take effect August 1, 1887. The extraordinary development of the sugar industry in recent years is striking. The average consumption per head of the population of the chief sugar-consuming countries in the periods mentioned is reported as follows:

Country.	Year.	Kilograms.
Great Britain	1876–'80	28.07
United States	1876–'80	17.11
Denmark	1875–'79	11.70
Holland	1878–'79	10.80
France	1876–'79	8.50
Switzerland	1875–'79	8.34
Germany	1874–'79	6.56

From 1881–'86 the consumption has rapidly increased, on an average per head of nearly 9 kilograms, while Great Britain's consumption shows one of 32 kilograms per head.

Great Britain's high average is as remarkable as Germany's low one, and it is but natural, therefore, that the former remains chief consumer of Germany's sugar. From the 1st day of January to the 30th of October, 1887, Germany imported in 100 kilograms (2.2 cwt.) 35,568 (against 27,624 of same period in 1886), but exported 4,413,892 100 kilograms (against 4,069,706 in same time 1886), viz:

Country.	100 kilograms.	Country.	100 kilograms.
Great Britain	2,574,000	United States	81,843
Netherlands	300,444	Russia	50,259
Sweden	108,104	Belgium	47,460
Switzerland	98,742		

Prices remain notwithstanding low. Taking the two German chief sugar-producing cities, Cologne and Magdeburg, I find the following official price quotations per 100 kilograms:

Year.	Raw sugar.		Refined sugar.	
	Cologne.	Magdeburg.	Cologne.	Magdeburg.
	Marks.	*Marks.*	*Marks.*	*Marks.*
1879	64.9	62.6	79.1	77.2
1883	62.5	59.9	76.7	74.6
1886	45.2	42.9	55.8	54.3
1887 (October)	44.23	41.88	55.50	54.02

The consumption of German sugar abroad increased from the year 1870 to 1885 by 46.12 per cent., that in Germany by 105 per cent. As to the causes of the increased exports in recent years this plus can not be explained alone by the greater wants of the international market; but the technical progress of German sugar industry must also be taken into consideration.

As the German tax on beets is intended to be a consumption tax [Export says] it is but justified that in case of exportation such tax is restored to the exporter; for it is clear that the consumer in the international market, receiving offers of sugar from all directions, will not be willing to pay a German tax. Now, actually, for the sugar exported not only the tax paid is returned, but there is also paid a bonus, which bonus assumes the character of an export bounty. This bounty has induced an enormous increase of sugar production and a rapidly augmented exportation of sugar.

In the years from 1871 to 1885 the excess of bounties paid over the beet tax amounted to 5,737,274 marks.

The results of an official international meeting held at London a short time ago to do away, if possible, entirely with all export bounties on sugar, have not yet been officially published. In principle this export bounty has been disapproved also by German beet-sugar manufacturers in a recent meeting, though these latter claim to be still dependent on it in practice.

MOOR-LAND CULTURE.

A moor-culture exhibition took place at Berlin in February, 1887. This exhibition, instituted by the Society for the Promotion of Moorland Culture—the first of this kind—was intended to bring before the public the methods, machines, and processes by which moorland could be brought into a state of cultivation. Germany possesses 250,000 square kilometers of such land.

The first group contained both deep ground and surface specimens of the moorland in every part of Germany, together with the plants or peculiar products found thereon. In the next group were exhibited the various ways and means by which moorland is to be reclaimed. By the well-known Rimpan process of "dam culture," the sand obtained by the digging operations, in connection with the cutting of the drains, is spread over the ground; a proceeding which, it is said, has produced very favorable results. Noteworthy was the plan and project of the Schweder Techno-Culture Bureau at Gross-Lichtenfelde near Berlin.

After the preliminary preparation above described of the land manuring follows. The substance of moorland being of a highly organic nature, necessitates the application of mineral matter. Rich selections of every sort of manure were exhibited. The kainite-producing salt-works of Stassfurt were well represented. But the utilization of moorland for farming is not the only expedient. Many moors produce valuable fuel, peat, and turf. Turf is, besides as fuel, used for other purposes. Its high absorbtive qualities make it peculiarly adaptable as litter. It finds use also in surgery for certain kinds of wounds.

Noticeable was the application of the turf to weaving. Mixed with 30 per cent. of cotton, wool, or hemp, the fiber of the turf-moss turns out a good yarn, which Professor Gruner's collection exhibited in different colors and patterns.

Plants and fruits were shown that had been obtained by the application of the different methods to moorland, for instance giant specimens of potatoes, beets, etc.

CATTLE BREEDING.

A census of German cattle has not been taken since January 10, 1883. Farmers do not cease to complain of the decline of this agricultural branch. But for the wool necessarily wanted by the flourishing German industry, higher rates of duty would have certainly been enacted on wool of sheep, since, in comparison with former years, their number has been steadily on the decrease. Sheep are now chiefly bred for meat purposes, large quantities being exported to France, viz: 523,718 heads in 1886; to Belgium, 249,549; to Great Britain, 256,335; Netherlands, 100,003; total export, 1,305,236; total imports, however, only 6,390. Their export in 1884, 1,335,300; in 1885, 1,195,993.

	1884.	1885.	1886.
Oxen:			
Imported	16,891	12,718	16,375
Exported	59,967	49,321	39,980
Cows:			
Imported	47,303	45,456	65,311
Exported	56,893	35,235	24,821
Hogs:			
Imported	.....	545,633	568,570
Exported	502,379	423,293	289,317

Striking is the decline in the exportation in this table. The cause for this is found in the growing rates of duties, especially in France, and the change in the sources of supply England has made. She derives her supply more and more from Australia and America.

BUTTER.

The exportation of butter has declined, and the average price of best quality of Holstein butter was, in 1886, by 5 marks per 50 kilograms lower than in 1885 (107 against 102 marks). Also here American competition is noticeable, especially in England—nay, even in Hamburg, where, in 1886, 17,500 casks of American butter, at prices from 45 to 65 marks, were imported in weekly supplies.

INFLUENCE OF PURE AIR UPON THE YIELD OF MILK.

A dairy at Frankfort on the Main made the following valuable observations. They kept in a standard stable 80 Swiss cows, extraordinarily well fed and treated. In the years 1877 to 1879, prior to the introduction of a ventilation system, the same yielded, on an average per cow, 3,700 liters in 1877; same amount in 1878, and 3,716 liters in 1879. Subsequent to the introduced ventilation the amount of milk yielded—the food being the same—was as follows: In 1880, 4,050 liters milk per head; in 1881, 4,152; in 1882, 4,354 liters.

LARD.

During 1886, 419,736 double cwts. (=100 kilograms) were imported; hence considerably more than in 1885 were imported. The lard imported via Hamburg is much in favor, passing here once more through refineries.

MORE PROTECTION TO BIRDS.

The thoughtless extermination of useful birds, especially for the transient satisfaction of a whimsical fashion, calls for an energetic protection of birds in the interest of farming and forestry. A bill to that effect will be submitted to the present Reichstag. Efforts will be made to regulate this matter, alike important to all countries, by international agreements.

GERMAN FISHERIES.

According to a recent return there are in Germany 404 fishing vessels, with a gross capacity of 33,528 cubic meters, and a regular crew of 1,452 men; 152 vessels carry on fishing in the North Sea outside the coast waters by means of ground draw-nets; 16 by driving-nets; 100 by bottom fishing; 130 by ground draw-nets and trap-nets.

As to the yield no available statistics exist. Herring fishing is restricted to the working of 14 luggers of the Emden Herring Fishing Company. This little fishing flotilla represents, with all fishing implements, a value of about 300,000 marks, furnishing gross proceeds of about 350,000 marks per year.

MINES.

Exhibit O shows fully production of German mines, salt-works, furnaces, and foundries in 1885–'86. From this return it will be seen that the total production of the coal mines, salt and smelting works, etc., in 1886 remains about the same as in 1885, but the average prices per ton of some products have experienced a further reduction (see Exhibit A), while prices in 1887, as already stated, show partly an improvement.

EXHIBIT O.—*Production of German mines, salt-works, and smelting-works in the years* 1885 *and* 1886.

Product.	Quantity.		Value.		Average price per ton (22 cwt.).	
	1886.	1885.	1886.	1885.	1886.	1885.
Products of mines:						
Mineral, coal, and bitumen:	*Tons.*	*Tons.*				
Stone coal	58,056,598	58,220,398	$71,573,000	$72,100,000	$1.23	$1.24
Brown coal	15,625,986	15,355,117	9,573,000	9,610,000	.61	.62
Asphaltum	42,894	45,412	51,000	61,000	1.19	1.34
Naphtha	10,385	5,815	229,000	112,000	22.03	19.26
Mineral salts:						
Rock salt	444,397	377,491	512,000	465,000	1.15	1.23
Kainit	240,421	242,281	838,000	895,000	3.48	3.65
Other potassic salts	704,849	678,662	1,845,000	1,764,000	2.61	2.60
Ores:						
Iron ores	8,485,758	9,157,869	7,055,000	8,071,000	.83	0.88
Zinc ores	705,177	680,654	1,888,000	1,820,000	2.61	2.67
Lead ores	158,505	157,869	3,789,000	3,592,000	23.90	22.76
Copper ores	495,756	621,381	3,431,000	4,583,000	6.92	7.38
Silver and gold ores	21,230	24,561	1,066,000	1,021,000	50.20	41.57
Common iron pyrites	113,656	116,212	214,000	228,000	1.88	1.96
Salts obtained from aqueous solutions:						
Table salt (chloride of natrium)	479,485	461,292	2,806,000	2,797,000	5.85	6.06
Chloride of potassium	114,136	107,253	3,634,000	3,493,000	31.83	32.56
Glauber salts	63,667	60,459	495,000	638,000	7.78	10.56
Potassium—magnesium sulphate	29,045	27,207	371,000	338,000	12.75	12.40
Sulphate of alumina	19,463	20,313	420,000	448,000	21.56	22.07
Alum	3,228	3,880	99,000	125,000	30.83	32.20
Production of furnaces and foundries:						
Crude cast iron	3,528,658	3,687,434	33,859,000	38,305,000	9.60	10.38
Zinc	130,854	129,096	8,216,000	8,059,000	62.78	62.42
Lead	92,620	93,134	5,257,000	4,620,000	56.85	49.60
Copper	20,021	20,628	4,119,000	4,960,000	205.72	240.43
	**Kilograms.*	*Kilograms.*				
Silver	319,596	309,418	10,164,000	10,505,000	31.67	33.81
Gold	1,065	1,378	708,000	917,000	664.73	665.46
	Tons.	*Tons.*				
Tin	79	107	41,000	46,000	516.24	431.98
Sulphuric acids	352,723	343,295	3,015,000	3,205,000	8.55	9.29
Species of pig-iron:						
Foundry iron	399,712	446,717	4,142,000	5,049,000	10.25	11.20
Ingot iron	1,494,419	1,200,179	14,587,000	13,752,000	9.76	10.48
Forge iron	1,590,792	1,885,793	14,002,000	18,114,000	8.59	9.53
Cast ware of first smelting	30,179	40,099	960,000	1,209,000	31.67	30.00
Scrap iron and grains of pig-iron	13,356	14,646	168,000	182,000	12.38	12.38
Pig-iron, manufactured:						
Cast iron of second smelting	704,150	673,916	27,064,000	27,210,000	38.32	40.24
Wrought iron and steel	1,415,611	1,504,973	38,074,000	43,644,000	26.89	28.81
Ingot-iron (inclusive crucible cast steel)	1,376,356	1,202,090	40,183,000	37,573,000	28.80	31.18

*One kilogram is equal to 2.2 pounds.

MINERS.

The following number of persons were employed during the years 1872 to 1886:

Years.	In iron-ore mines.	In high furnaces.	In iron working.
1872	39,421	26,171	115,482
1873	31,733	24,342	118,748
1878	27,745	16,202	92,026
1880	35,814	21,117	106,968
1882	38,783	23,015	125,769
1884	38,914	23,114	132,194
1886	32,137	21,470	130,858

In 1886 were employed, on a daily average throughout the year, in the following mines, etc.:

Description.	Number of chief mines in operation.	Number of persons employed.
Coal and bitumen	436	217,581
Lignite	625	29,668
Rock salt	7	1,062
Kali salts	7	4,803
Iron ores	530	32,137
Zinc ores	58	13,663
Lead ores	53	14,129
Copper ores	9	14,154
Silver and gold ores	19	6,847
Tin ores	2	317
Cobalt, nickel, and bismuth ores	9	780
Antimony and manganese ores	67	714
Pyrites, etc	12	549
Total mines	1,954	337,193
Salt works	123	6,159
Smelting works:		
(a) Pig iron	105	19,791
(b) Pig zinc	29	8,919
(c) Pig lead	13	2,617
(d) English sulphuric acid	63	3,643
Total smelting works	248	40,723
Iron foundries	1,069	45,635
Welding iron works	302	50,759
Ingot iron works	89	33,895

GERMAN COAL DEPOSITS.

A Berlin paper says:

Germany is clearly destined to occupy the foremost position among European nations as a coal producer when the great wealth of others has so far diminished that they are not longer able to raise more than enough for home consumption. Russia, probably, is richer in coal than Germany, but the full development of Russian coal fields is an event of a very distant future. Germans have already established a very important industry. Its expansion chiefly depends upon the supply of means for getting rid of the product, large canal and railroad extension, the construction of which during the next ten years has received the sanction of the Reichstag. The Ruhr basin contains, without going beyond its proved limits, 50,000,000,000 of tons of coal—enough to supply the present demands of German industry for a thousand of years to come; but there are good reasons for presuming that the untested portion of this basin contains as large a quantity. The Rhinish Westphalian districts may furnish 100,000,000 of tons annually for a period of one thousand years. The Silesian coal fields are probably richer; if worked to a greater depth there may be as much as 200,000,000,000 of tons available. The Saar basin contains about some 500,000,000,000 of tons. All this is exclusive of the deposits of brown coal which are known to exist in great abundance in many places.

COMPARISON OF AMOUNT OF COAL PRODUCED IN SOME INDUSTRIAL COUNTRIES.

The royal English committee to inquire into the causes of the decline of trade and industry finds one of the impediments of industry, above all, in the energetic and organized competition of other nations in an economical respect, especially appearing in a comparatively

rapid growth of mining products, particularly in coal, as the following table goes to show:

Countries.	1870.	1885.	Percentage of increase.
	Tons.	*Tons.*	
Great Britain	109,000,000	159,300,000	46
United tates	35,400,000	96,900,000	173
Germany	26,300,000	60,000,000	128
France	13,200,000	21,000,000	57
Belgium	13,600,000	17,300,000	27
Austria	4,600,000	7,100,000	69

Germany's export of coal to Italy through the St. Gothard Tunnel increases steadily, Italy's consumption of coal having in the course of seven months risen by 263,780,100 kilograms; in value, 6,000,000 lires.

Amber remains to be a good item of revenue to the Prussian state, which is the proprietor of all establishments for the recovery of this valuable product, or rather fossil. Such revenues amounted in the last year reported to 717,153 marks and *in toto* for a ten years' period to 6,872,395 marks.

Conventions of industrial works, of which I reported last year, are nearly the rule in Germany, especially in iron industry. That such unions, it is stated, exercise a favorable influence on the market, at least for a time, can not be doubted. But it is questionable whether the sudden rise of profits which follows a coalition is really of much value, and whether such advantages are not counterbalanced by a reaction often quickly following. Silesian rolling works have dissolved, members finding their interests not sufficiently protected by the "cartel."

WAGES IN SAXONY.

Average wages of laborers per year, published in the statistics of the "Berufs-Genossenschaften," above described:

Kind of industry.	Amount.	Kind of industry.	Amount.
Gas and water works	$235.00	Trades unions—Continued.	
Musical instruments	219.90	Private railroads	$159.90
Breweries, malting	219.10	Still-house	156.10
Tramways	212.20	Paper	154.20
Type printers	210.30	Millers	149.40
Rhinish Westphalian foundries and rolling works	208.40	Rhinish Westphalian Textile Union	148.50
Northeastern Iron and Steel Union	198.90	Pottery	146.60
Trades unions for the following industries and trades:		Silk-trade union	145.60
Chemicals	193.00	Chimney sweepers	142.80
Jewelry	191.30	Food articles	142.80
Building	185.60	Paper working	141.80
Leather	182.70	Sugar	145.60
Wood	181.80	Linen	117.00
Glass	179.90	Clothing	95.20
Fine mechanics	171.30	Tobacco	95.20
		Tiles, bricks, etc	64.70

Total average wages given of a German operative at 622 marks ($148).

For a direct comparison of the wages obtained in the various trades the figures above given are not complete enough, for the reason that they do not only contain wages of a varying nature paid to women

and children, but also take into account the idle time necessarily occurring in some trades owing to the seasons.

From the reports both of chambers of commerce and factory inspectors it appears that, generally speaking, wages remained on the same level as in the previous year.

PRICES OF VICTUALS IN 1866–'86.

The royal Prussian bureau of statistics has published the following comparative table as average prices in pfennigs (one 0 omitted) for the whole Kingdom of Prussia:

Year.	Per 100 kilograms (2.38 cents).									Per 1 kilogram.						Eggs, per 60 pieces.
	Wheat.	Rye.	Barley.	Pease.	Beans.	Lentils.	Potatoes.	Straw.	Hay.	Beef.	Pork.	Veal.	Mutton.	Bacon.	Butter.	
1886	157	134	135	208	279	434	41.0	45.0	60.0	117	119	101	111	169	210	324
1885	162	143	143	221	293	402	46.0	38.5	54.5	119	120	102	114	175	221	327
1876	210	174	168	250	285	395	56.5	72.0	85.0	113	131	98	107	190	245	344
1866	166	146	135	170	.....	.....	41.0	47.5	66.0	85	100	.....	.....	.....	175	.....

This table shows that average prices of victuals in 1886 were cheaper than ten and twenty years ago.

Concerning the working time of laborers, a tendency is noticeable to shorten the same. Cases are increasing where work is reduced from eleven to ten hours.

GERMAN STOCK COMPANIES.

In 1886 there were 1,055 stock companies in Germany, representing a capital of 4,239,500,000 marks and a loan debt of 588,000,000 marks. Banks are naturally credited with the largest share of the total capital, viz, 1,454,700,000 marks; mining and smelting works come next with 586,700,000; railroads, 501,500,000; insurance companies, 444,000,000; land and building, about 700,000,000; chemical works, 181,200,000; engine and machine works, 171,500,000; spinning and weaving companies, 165,800,000, and brewery companies, 149,800,000 marks. Newly-formed were:

Year.	Companies.	Capital stock.
		Marks.
1886	116	105,483,900
1885	74	55,534,700
1884	165	123,952,500
1883	182	167,643,420

Fifty-five companies increased their capital stock by 33,472,500 marks in all.

HOUSE INUUSTRY.

House industry is extensive in Germany. According to the latest census of 1882 there were 479,534 persons engaged in house industry, of which nearly one-third, viz, 137,375, is credited to the Kingdom

of Saxony, 90,124 alone to the district of Zwickau. More of such districts are on the eastern and northern boundaries of Silesia, as far down as the Fichtel Mountains, Thuringia; near Dusseldorf, and Lower Alsace and Lorraine.

House industry according to trades.

Branch of industry.	Total of German Empire.	In Zwickau district alone.
Hosiery	40,100	26,250
Trimmings	14,628	12,498
Weaving of mixed articles	22,051	10,133
Woolen weaving	23,603	7,723
Laces and linen embroidering	8,774	5,424
Finishing of hosiery	4,695	4,337
Ready-made ladies' goods	6,055	4,130
Gloves	9,056	3,119

Chief districts in house industry are, for linen weaving, Bautzen; silk weaving, Dusseldorf district; cotton weaving, Breslau; sewing and tailor's work, Berlin; shoemaking, Palatinate (Bavaria); cutlery, Dusseldorf; tobacco manufacture, Alsace.

It is regarded only as a question of time to place also this kind of industry under the control of factory inspectors; but opinions disagree about this matter, as such a measure most likely would involve an interference with personal liberty.

The general report prepared from the special reports of factory inspectors for 1886 arrives at the conclusion that, as a rule, business activity has been very brisk, and that owing to great competition and to the decline of prices caused thereby only the employers in some of the industries were more or less sensibly affected, but that the employés have as yet not experienced any noteworthy deterioration in wages or decreased opportunities for work. On the contrary it is stated that, notwithstanding the increased work done by machines, not a slight increase in the number of laborers employed has ensued to the benefit of hand work even in districts of a less favorable industrial position.

Wages not to be paid on Saturdays, but on prior days. Thus the laborer would get more leisure to make his purchases for the following week and escape the temptation to spend a comparatively large portion of his weekly wages for amusements, which, in Germany, chiefly take place on Sundays.

DESIGNS AND PATENTS FOR INVENTIONS.

In 1886, 22,020 plastic designs, 49,484 other (surface) designs, and 4,008 new inventions were patented.

CAUSES OF THRIFT OF GERMAN INDUSTRY AND TRADE.

Above all, the universal education of the German people has developed a high appreciation of the importance of industry, both for the individual and national welfare, and has given the impulse to obtain skill in manufacturing, and the necessary knowledge to gain the best markets.

Great Britain's industrial and commercial preponderance (a Berlin paper demonstrates) was secured only by her iron and coal mines and by directly procuring,

by means of a large marine, all the raw material for her industry from every part of the globe. Thanks to her great wealth in money and working force this supremacy was for years untouchable. As soon, however, as wages rose beyond those paid on the continent, Great Britain's advantages were counterbalanced by circumstances which the intelligent German was quick in discerning and utilizing. The ability which education and a scientific training develops, discovered at once all of the weak sides of the British industrial and economical system. Deriving profit from the best instruction and low wages in the manufacture, and by means of pertinacious efforts to secure foreign markets, the trade of Germany challenges to-day foreign manufacturers and merchants.

Such education, especially in industrial discipline, can best be judged by an example. I have before me a brief report of the Kunst Gewerbe Schule (Art Industrial School), Stuttgart. The work done there is the highest development of the influence of art upon materials; it is also the chief training-school for teachers of industrial art for the whole Kingdom of Würtemberg. It is conducted by professors of great ability. They are men who can not only teach but practise applied art in its highest forms. Some of them are practical designers, and they perform a good deal of outside professional work in order to increase the very moderate compensation they receive. The regulations for admittance of students are strict. They must show proof of having worked at least two years at a trade, and must produce drawings or work evidencing sufficient talent and training. The period of attendance is three years; fees are moderate. Great care is bestowed upon each student according to his talent, his individual trade, or occupation. The subjects taught are geometrical and architectural drawing, light and shade, perspective and figure drawing from casts and life, decorative ornament, wood-carving, modeling, and casting, painting (as applicable to decorative trades, architectural styles), anatomy, and history of industrial art. The work done is systematic and thorough. For example, in wood-carving every work goes through a regular course.

First, the design is drawn on a board; then the model in clay or wax superadded and finished with precision; finally, the work, carved in oak or walnut, is copied from the model. The designs are thus rendered in a masterly fashion, and all slipshod work or alteration avoided.

Similar institutions—in addition to special schools of commerce—exist throughout the Empire. Some Berlin firms employ hundreds of artists, educated at art academies, as designers. In ready-made ladies' goods Berlin controls the international market. Renowned Parisian firms, dealing in fancy flowers, are said to have their leaves made in Berlin. Artificial feathers, it is further stated, are made here cheaper and by no means less beautiful than in Paris.

GERMAN TEXTILE INDUSTRY.

No branch of industrial activity in Germany has, owing to the new customs policy, assumed such an extension as the German textile industry. Old branches of the latter, until then in a languid condition, have not only been revived, but entirely new methods of production have been created. The increased consumption of raw material, which is mostly imported and this duty free, is a speaking proof, as the appended comparative table will show:

IMPORTED.

[Amounts in 100 kilograms (=2.2 cwts.).]

Year.	Cotton.	Wool.	Flax.	Hemp.	Jute.	Raw silk.
1880	1,486,536	687,555	363,691	406,891	175,644	29,038
1881	1,570,700	773,721	502,592	545,124	186,025	33,078
1882	1,558,588	885,022	741,802	389,501	236,013	34,371
1883	1,890,930	909,693	675,608	418,258	334,720	33,726
1884	1,775,173	1,056,561	651,855	403,077	337,993	37,763
1885	1,667,707	987,901	571,675	416,029	418,996	29,356
1886	1,720,300	1,086,802	420,930	320,748	440,019	36,747

EXPORTED.

1880	119,174	143,253	232,300	235,407	2,452	8,832
1881	178,025	120,849	318,717	345,840	2,021	9,883
1882	174,792	134,319	526,518	240,661	2,537	9,416
1883	206,037	127,216	422,150	218,639	3,885	9,942
1884	181,154	119,103	381,550	199,541	3,771	10,423
1885	94,608	100,952	341,571	223,770	7,870	7,127
1886	110,630	130,370	237,517	160,868	7,995	7,257

EXCESS OF IMPORTS OVER EXPORTS.

1880	1,367,362	544,302	131,391	171,484	173,192	20,206
1881	1,392,675	652,872	183,875	199,284	184,004	23,195
1882	1,383,796	750,703	215,284	148,840	233,456	24,955
1883	1,684,893	782,477	253,458	199,619	330,835	23,784
1884	1,594,019	937,558	270,305	203,536	334,222	27,340
1885	1,573,099	886,949	230,104	192,259	411,126	22,231
1886	1,609,670	956,432	183,413	159,880	432,024	29,490

Corresponding is a considerable increase of goods:

Manufactures of—	1881.	1886.
Cotton	218,931	265,088
Wool	225,144	268,453
Linen	35,249	29,359
Silk and silk mixed	47,478	64,478
Clothes, underwear, millinery	45,149	66,686

Necessarily a large working capital is required, particularly in woolen manufacture. In the summer of 1887, therefore, some manufacturers in Berlin not sufficiently provided with financial means were compelled to suspend payment.

CONSUMPTION OF RAW COTTON.

As above shown, the consumption of cotton is steadily increasing in Germany. While in 1867 Germany required only 66,559 tons, or 2.07 kilograms per capita of population, consumption rose in 1886 to 160,967 tons (22 cwts.), or to 3.41 kilograms per capita.

The German cotton manufacturers, associated with the members of the Bremen Cotton Exchange, have established a market in Bremen, where they can procure the raw material they require, and thus free themselves entirely from foreign, especially English, influence. The cotton exchange anticipates that contiguous countries

will become customers. Consumption of raw cotton per year is rated:

	Bales.
Germany	1,034,983
Austria	500,000
Russian Poland	119,200
Switzerland	100,000
Holland	44,380
Belgium	71,500
Total, about	1,870,063

WOOL PRODUCTION.

Production of wool on the globe is estimated by Professor Settegast at about 1,000,000,000 kilograms, about 186,000,000 falling to merino wool of all description, consumed in the following proportion by the producing countries:

Country.	Wool.	Percentage of total production.
	Kilograms.	
Germany	18,000,000	10
Austria	15,000,000	8
France	15,000,000	8
Spain and Portugal	8,000,000	4
European Russia	7,000,000	4
Africa	15,000,000	8
North America	13,000,000	7
South America	25,000,000	13
Australia	70,000,000	37.6
Total	186,000,000	99.6

In Europe Germany is the largest producer. It is stated that fleeces, owing to climate and rational feeding methods, are denser than those in over-sea countries, where sheep are kept in large flocks and not so well nursed. Therefore, German merino wool obtains higher prices. For the same reason Germany furnishes constantly merino breeding sheep for shipment to transmarine countries. Professor Settegast mentions a German merino breeder who in 1880–'86 exported 509 bucks and 353 ewes, at a total net proceed of 232,264 marks, or 268 marks per head.

ARTIFICIAL WOOL PRODUCT.

Remarkable is also the growth of German artificial wool. Its raw material consists in the main of two species: First, of so-called shoddy, prepared from old hosiery, flannels, woolen stuffs; and secondly, from the mungo obtained from the refuse of tailor's work, old clothes, rags, and so forth. Of such wool was imported and exported in the years named:

Year.	Imported.	Exported.	Exports over imports.
	Kilograms.	*Kilograms.*	*Kilograms.*
1880	5,325,200	14,168,100	8,842,900
1881	5,980,800	14,231,300	8,250,500
1882	5,595,400	14,939,300	9,343,900
1883	5,529,500	12,970,800	7,441,300
1884	4,421,100	11,756,200	7,335,100
1885	8,276,400	13,648,200	5,371,800
1886	7,819,400	13,180,500	5,361,100

In consequence of the import duties resolved upon, 1880, the importation of so-called "cheviots" made of artificial wool (formerly exported in large quantities from England to Germany and here made use of in the manufacture of rain-cloaks) has nearly ceased, and artificial wool is now manufactured chiefly in Berlin and Saxony.

Berlin's dyeing and finishing works have regained their former reputation, attributable to quick utilization of modern inventions and the progress made in chemistry; for instance, in aniline colors. The durability, beauty, and variety of the dyes obtained are striking. The old dyes are continually losing favor, being replaced by a newer product, possessing some special properties, such as greater qualifications not to fade when exposed to the light and washing.

The sales of azo-dyes are constantly increasing to an unexpected degree, even of such cotton dyes the secret of which was discovered in 1885. Through a series of indefatigable investigations it has become possible to produce whole series of those particular dyes in yellow, orange, scarlet, cherry-red, violet, and blue. All of these are mostly cotton dyes.

GERMAN WEAVING INDUSTRY.

Its condition was varying. While manufacturers of articles for domestic use are complaining, those manufacturing articles subject to fashion were partly well employed. The exportation of loom products to East Asia (Japan) and South America and to the Danube principalities has greatly increased.

The woolen goods industry of Berlin especially is of a great extent; its annual sales are stated to reach about sixty millions. Berlin exports its woolen goods to all countries. In the average number of cases the Berlin woolen goods manufacturer owns no factory; he spins no yarn; he weaves no stuffs, nor does he finish the latter after weaving. This is done by "house" weavers and spinners and by the numerous finishing establishments in Berlin. This method enables the Berlin manufacturer to conform quickly to the changes of fashion, thus giving his trade an elastic character. This circumstance, however, is conducive to an excessive increase of production, for the reason that this mode of doing business requires but little capital, and that the number of manufacturers exceeds demand.

Carpets are extensively manufactured in Berlin, Hanover and neighborhood, in Chemnitz, Schmiedeberg, Wurzen, Düren, Barmen, Cottbus, and certain Saxon towns. This industry was quite satisfactory until a few years ago. But now sharp competition has commenced. Expenses are high. A thorough knowledge of the "technique" and material is required, also ample pecuniary means. In large factories draughtsmen of high reputation are employed all the year round in preparing new designs. All kinds of velvets and Brussels carpets are woven. It is stated that neither in Brussels nor in Belgium a carpet factory exists. So-called Smyrna carpets, manufactured here, show great fineness of wool and high technical qualities in design, hardly inferior to those of the Orient.

GERMAN FLAX AND HEMP INDUSTRY

While in 1870, and even later, mechanical flax-spinning in Germany was insignificant, a large number of manufactures of this kind are in operation at present. This industry of Great Britain,

once so flourishing, is on the decline, since, simultaneously, France, Belgium, and Russia have become prosperous competitors.

Also in this line of business German manufacturers must derive their raw material from foreign countries. Efforts to increase flax and hemp cultivation in Germany have been without avail; the same shows rather a decrease by 19 per cent. since 1878 in case of flax, and by 28 per cent. in case of hemp.

Russia continues to be the largest supplier of this kind of spinning material. Germany imported therefrom (in 100 kilograms) the following:

Years.	Flax.	Per cent. of total imports.	Hemp.	Per cent. of total imports.
1880	316,726	87.1	336,686	82.7
1883	6-6,096	94.2	330,352	79.0
1886	359,656	85.4	220,255	71.8

In 1884 31 flax spinneries, inclusive of thread and bleaching works, with a capital stock of 59,000,000 marks; 48 mechanical weaving mills, constantly connected with house industry (capital stock of 29,709,724 marks); and 7 hemp-spinning mills and pack-thread mills (12,500,000 marks capital stock) were in operation.

Very considerable and materially extended was the manufacture and trade of the different classes of Jersey goods, giving employment to thousands of skillful hands.

GERMAN JUTE INDUSTRY.

Although the jute industry was introduced into Germany as far back as 1861, its real progress is of a recent date. Besides packcloth, sacks, sail-cloth, rope material, etc., German manufacturers produce carpets, tickings, huckabacks, and the like. Recently a firm introduced in the market a material to which the name of jute velvet has been given, and which is used for furniture coverings, hangings, etc., and is even applied to tapestry. The number of jute factories, spinning and weaving, in Germany, possessing 57,126 spindles and 2,250 looms, is stated to be 23. Since the last return of the Society of German Jute Manufacturers several new companies have been organized, so that the number of spindles now in use may not be far from 70,000, having a total productive efficiency of 600,000 double centners (100 kilograms). In 1880 the imports of raw jute reached only 17,564 tons; in 1886, 44,000, mostly brought to Hamburg and Bremen.

CURTAINS.

The works at present in operation are reported to have been, with few exceptions, fully occupied for the domestic market. Efforts, however, are being made to enter into competition abroad with the English manufacturer. Trade has been secured for medium and superior qualities in Holland, Switzerland, France, Belgium.

UMBRELLAS.

Umbrella sales in Germany are, it is stated, the largest in the world. The umbrella, as a protector against the freaks of the weather, seems to form an integral part of the equipment of the

genuine Teuton. The writer can certainly testify to the fact that "the rain, it raineth every day" in Berlin, makes the umbrella-shed an indispensable requirement. China and Japan receive a good supply from Germany. German manufacturers make certain specialties—so-called "Gloria" umbrellas, made of half silk and half cotton fabrics, which are sold everywhere. Foreign competition has had, thus far, no show against the umbrellas of Germany. The value of umbrellas and, to a smaller extent, of parasols, sold by German manufacturers, amounts annually to about 6,000,000 marks. All the accessory materials required by the manufacturers are produced in Germany proper.

HATS.

This industry is prosperous. Exports are quite large. German hats are not sold any more under French labels, as formerly. Netherlands, Belgium, Switzerland, Denmark, Sweden, send regular customers.

	Kilograms.
Exports:	
1886	299,700
1885	268,300
Imports:	
1886	45,100
1885	44,600

ELECTRIC LIGHT.

The progress is decidedly rapid, as specially shown in Berlin. Germany has about 300,000 incandescent lamps in use. One town after another is being provided with central stations, while numbers of others are proposing to introduce the light on a more or less extensive scale. A Berlin paper says:

> Heretofore the Edison lamp has been chiefly in use, but in the new installations the Khotinsky lamp will be given a trial. It is said to be more durable and to require less current than those of other systems, and on that account it has found great favor on board of our war vessels for both light and signaling purposes.

The city of Berlin has recently made a contract with the Berlin Electricity Works. The company agreed that for incandescent lamps with a light-giving efficiency of less than 16 normal candles, not the full fee per lamp and year of 6 marks ($1.42) but the proportionately lower amount shall be paid, and that if, in case of arrangements for excluding lamps from the circuit, not all of the incandescent lamps can burn at the same time—the full lamp fee shall be paid only for as many lamps as can burn simultaneously, while for the remainder only 33⅓ per cent. of such fee shall be levied. In the event of electrical lighting by means of arc lamps, the company shall have the right to collect for each single lamp a yearly tax 40 marks ($9.52) from consumers. The compensation for the amount of current consumed shall be the same as in the case of incandescent lamps with a 16-candle light-giving efficiency, viz. 40 pfennigs (9.52 cents) per burning hour.*

* It is stated that lately a decided improvement in incandescent electric light has received letters patent. Dr. Auer Van Ildsbach, of Vienna, is the inventor. The improvement consists in adding thorium acid to increase the power and protraction of light.

TELEPHONE.

The use of the telephone is constantly increasing in German cities, especially in Berlin, where the subscribers are very numerous. Annual subscription is comparatively low in Germany, as seems to appear from a statement published.

In Belgium $47.6 to $28.56 are paid; in Denmark, $49.48 to $39.09; in Germany, $35.70; in Italy, $38.08; in Holland, $47.60 to $46.17; in Sweden, $33.32 to $22.84; in Switzerland, $28.56; in Austria, $85.68 to $38.08; in Spain, $71.04 to $53.51; in England, average, $59.50. In France and Russia higher rates are paid. In Germany the subscription includes the use of the telephone irrespective of distance.

LAMP INDUSTRY.

Berlin lamp industry, carried on by forty-five firms, gives employment to at least 2,500 persons. Thus far the electric light has not exerted any disadvantageous influence upon same; on the contrary, manufacturers are equal to the requirements of modern time, since gas-light, both as to light-giving efficiency and cheapness, competes, it seems, successfully with electric light. Even for petroleum light, so-called diamond and mitrailleuse burners have been invented and patented, which in many magazines of Berlin prove with undeniable clearness that our producers of mineral oil have not to expect any decrease of sales, provided that Russian competition does not become too strong.

Among the most fashionable articles are low reading lamps of a round or oval shape, with porcelain or majolica stands. The principal demand is for cheap table and hanging lamps. The division of labor in the Berlin lamp factories appears to be perfect, the different parts of cast-zinc, cast-iron, etc., being made in separate workshops.

BRONZE.

Berlin bronze art industry is in a somewhat unsatisfactory condition. Though manufacturers are fully prepared to produce articles which, for beauty of form, superb and original designs, satisfy the most fastidious taste, the demand is too small to enable the artist, the manufacturer, and the dealer to obtain a sufficient renumeration for their labor. Cheap, small, or even imitated bronzes are chiefly purchased. Exports were more satisfactory, manufacturers studying and complying with the tastes of foreign purchasers. No particular style, however, appears to be favored. The taste of to-day might be described as an intermixture of "renaissance" and "rococo," a vulgar taste at best, which demands richness of ornamentation, exaggeration, and cheapness at the same time.

PRECIOUS-METAL INDUSTRY.

While formerly manufacturers devoted themselves chiefly to the production of articles "*de luxe*" they make now articles of a more practical use. Gold, platina, and silver strips are welded, after the mosaic style, upon metal ground, prepared by the incandescent (annealing) process, then compressed by powerful machines, and finally elongated by rolling into long sheets or strips. These sheets, which are now of all colors, yellow, red, green, white, gray, and black, are made into scarfs and neck-ties, being indestructible. Numerous

orders for exports have been received by manufacturers who chiefly are in the Pforzheim and Baden districts.

Berlin gold and silver jewelry shows a growing importance. A magnificent center-piece which the Queen of England received as jubilee present from her children and grandchildren was made in Berlin. It is a "*chef d'œuvre*" of gold and silver. A short time ago the Emperor of Japan ordered a magnificent "*parure*" in Berlin, though numerous Paris and London jewelers made strenuous efforts to obtain the order. In this as in many other industrial branches artistic training is noticeable. Large quantities also of cheaper articles for general demand are fabricated. Berlin silverware goes to all countries where import is not debarred by high duties. Gold-ware is rarely sold except in combination with precious stones. Choice gems, diamonds of finest water, clear rubies, find a ready sale.

CYCLING INDUSTRY.

At present there are about 64 cycle factories in the German Empire, employing 1,150 people, while many others make them outside of their principal trade. Thirty-seven factories derive half-finished parts of these machines from domestic, others from foreign makers; for instance, 36 from English manufacturers; 118 English and 132 Germans are employed in putting together the different parts. The average value of a cycling machine with all accessories is about 350 marks. The number of machines manufactured amounts to about 7,000 per annum. The import of English machines is much larger. The total number of cycles sold is rated at 20,000 in Germany.

In races which took place last summer and autumn in Germany, the German beat the English machines in several instances. Cycling is more and more applied to practical uses. The Diet of the province Hanover appropriated 7,000 marks for cycles to be used by highway supervisors.

EXPLOSIVES.

The capital invested in German explosives industry amounts to about 25,000,000 marks. German factories produce annually about 120,000 cwt., representing a value of 10,000,000 to 12,000,000 marks, employing 1,200 to 1,500 operatives. Production amounts to treble the domestic consumption. Factories are profitably engaged. Competition becomes gradually close. Manufacturers propose as protection for native industry that the transport of explosives containing nitro-glycerine should not be permitted in Germany unless a chemist, responsible to the German authorities, attests to the goods being manufactured and embaled in strict accordance with German regulations. There are about 7 to 9 dynamite manufactories; 7 forming with the Nobel Dynamite Company, Glasgow, a company known as the "Dynamite Trust Company;" annual output of each about 40 cwt. a day. Consumption last year in Germany, about 35,000 cwt. Price per cwt., 82 marks ($19.51). Exports in 1886, via Hamburg, 35,000 cwt. a corresponding quantity passing through other northwestern harbors.

Roburite, the new explosive, seems destined to play an important part, chiefly in peace operations, especially in bad mining weather for detaching coal. Roburite is considered by competent miners as best adapted for displacing gunpowder. It is cheaper than the latter and a more powerful dislodger of coal, dynamite being too

expensive and not dislodging sufficient amounts of coal, and, besides, poisoning the air. A drawback of roburite appears its becoming damp and losing strength if left in the mine for more than eight days.

The export of German small fire-arms, notwithstanding their first-class quality, is declining from year to year; 1880, 544,000 kilograms, 3,362,000 marks; 1886, 87,000 kilograms, 1,183,000 marks. As a reason for this decline is stated the lack of normal tests for German arms which are recognized abroad as valid. It is now intended to establish testing stations in Germany such as exist in England and Belgium.

LOCKS.

The German union of locksmiths' guilds has petitioned the Reichstag to place the sale of locks and their fittings under the control of practical and discreet locksmiths, who are members of the guilds and enabled to prevent the misuse of secrets applied in the manufacture of locks intended for special and often important purposes. Culprits ought never to be employed with the manufacture of locks while in prison.

MUSICAL INSTRUMENTS.

This industry is of more than ordinary importance in Germany, particularly in Berlin. In 1885, 33,900,000 marks' worth were exported; in 1886, 33,200,000—nearly one-half for pianos. Great Britain appears as the best customer; then follow North and South America, Australia, and Mexico; total production amounts to about 70,000; their value, 35,000,000 marks. The lion's share falls to Berlin. During the last four years for about 84,000,000 marks string and wind instruments were sent abroad. The cheaper classes of string instruments are obtained in Saxony. Better sorts are made in Berlin, where an average price of nearly 100 marks per instrument is obtained. Besides violins, Berlin exports bass-viols, cellos, mandolins, guitars, zithers.

GLASS.

Pane-glass manufacture controls a large portion of the foreign as well as the home market, England and Belgium exerting a close competition in German markets.

LEATHER.

German leather industry, as a rule, seems to be satisfactory. Import has decreased, export increased, and a good home trade has been secured. The following figures show the imports of foreign leather into Germany at different periods for the last fifteen years, in tons (22 cwts.):

Year.	Leather, all kinds.	Coarse leather.	Fine leather.
1870	1,504	239	165
1875	6,045	611	488
1879	8,495	618	427
1880	3,631	473	387
1886	4,192	255	487

In sole leather the United States appears as chief supplier, viz. in 1886, 1,119 double centners (100 kilograms), of 15,757,100 kilograms in all.

Decreased imports in 1880 characterize the effect of higher import duties as introduced in 1879.

Best classes of leather goods come chiefly from Austria.

Articles.	Exports.		
	1880.	1883.	1886.
Brussels and Danish glove leather, cordovan, etc.....tons..	2,129	2,586	2,693
All other leather.....	4,448	4,843	4,454
Coarse-leather articles.....	1,181	1,262	1,035
Fancy-leather articles.....	3,340	4,696	5,084
Leather gloves.....	183	258	292

HARDWARE AND FANCY GOODS.

This Berlin staple branch includes the manufacture of innumerable small articles, such as albums, purses, cigar cases, leather and wooden; cheap brass and imitated bronze wares. Orders appear to be abundant.

Particular mention deserves also the fancy-paper industry, producing artistic cards for Christmas and many other purposes. The variety of style and sizes, and cheapness in price both of hardware, fancy goods, also of paper, are sometimes hardly conceivable. Also in this case a regular division of labor is very advantageous to the industry. It is stated that German articles of that kind control to a great extent the international market. The once important French rival, who overspread the whole world with "articles de Paris," and did an extensive trade even with Germany, has now been distanced, artistic style again exercising its influence.

PAPER MANUFACTURES.

Considerable progress has been made in the manufactures of paper. While in 1840 only 22,000,000 kilos were manufactured, the amount reached, in 1887, about 270,000,000, representing in value 220,000,000 marks. Germany exported in 1878, 33,300 tons; 1883, 47,520; and 1886, 74,000, while England's export amounted to 17,000, 30,000, and 37,000 tons, respectively. Increased expenditures for fabrication, and scarcity of rags, induced manufacturers to look for other substitutes, and straw, moss, nettles, and wood were selected. By a new process, the employment of steam under high preasure, first introduced in Bismarck's paper-mill at Varzin, excellent pa king-paper, heretofore imported from England, was manufactured.

BERLIN AN EXPORT TOWN.

It would surpass the limits of this report and the clerical force at command to describe more fully the entire industry of Germany, especially that of Berlin. I do not know of any article that is not made here. Raw material, duty free if it can not be had in Germany, is derived from all quarters of the globe. Considering the great traffic and other facilities Berlin possesses, nearly all German man-

ufacturers of any prominence have either an office or branch establishment at Berlin. Each quarter of Berlin seems to represent a certain branch of industry, so that the purchaser can, without much loss of time, secure all he wants.

In my opinion it would be highly advantageous for American manufacturers and exporters to combine and open a permanent exhibition of American specialties at Berlin, no matter what the cost might be. Doubtless many trade connections could be established, since the flow of foreign visitors increases here every year, and the political importance of the German capital attracts thousands of people.

Of course only the best of our industrial products should be exhibited. Prior, however, to any final step, the condition and requirements of the German market should be carefully examined and considered by intelligent, experienced, and qualified men, familiar with foreign languages and the wants and customs of this country.

COMMERCE.

German merchant marine shows, for 1887, a decrease of ten wooden sailing vessels (with a tonnage of 1,536 registered tons) and an increase of one iron vessel of 712 registered tonnage.

EXHIBIT P.—*Number, age, tonnage, material, etc., of German ships on January* 1, 1887.

On the 1st January, 1887.	Sailing vessels.			Steamers.			Total.		
	No. ships.	Registered tons, net.	No. crew.	No. ships.	Registered tons, net.	No. crew.	No. ships.	Registered tons, net.	No. crew.
Baltic coast	1,200	275,922	9,395	331	120,744	4,055	1,531	396,666	13,450
German Ocean coast	2,127	554,867	14,171	363	338,170	11,400	2,490	888,037	25,571
Total	3,327	830,789	23,566	694	458,914	15,455	4,021	1,284,703	39,021
Under 1 year	39	17,481	351	31	32,388	1,388	70	49,819	1,739
1 to less than 3 years	99	37,174	842	79	51,843	1,668	178	89,017	2,510
3 to less than 5 years	116	29,831	711	164	131,394	3,710	280	161,225	4,421
5 to less than 7 years	100	19,800	555	89	63,398	1,799	189	83,198	2,354
7 to less than 10 years	275	75,208	2,020	67	36,071	1,054	342	111,279	3,074
10 to less than 15 years	529	141,619	4,084	114	77,894	3,118	643	219,513	7,152
15 to less than 20 years	473	147,885	3,986	71	42,445	1,735	544	190,330	5,721
20 to less than 30 years	1,041	262,894	7,575	58	14,496	758	1,099	277,390	8,333
30 to less than 40 years	433	78,021	2,583	16	3,668	192	449	89,589	2,775
40 to less than 50 years	105	16,546	726	4	307	31	109	16,853	757
50 years and upward	43	2,824	143	.....	.....	.....	43	2,824	143
Age unknown	14	656	40	1	15	2	15	671	42
Total	3,327	830,789	23,566	694	453,914	15,455	4,021	1,284,703	39,021
Principal material:									
Ships of iron	205	149,702	2,843	683	458,076	15,366	888	602,778	18,209
Ships of hard wood	3,041	633,147	19,732	10	667	73	3,051	633,815	19,805
Ships of soft wood	12	3,254	108	.....	.....	.....	12	3,254	108
Ships of hard and soft wood	62	38,573	784	.....	.....	.....	62	38,573	784
Ships of hard wood and iron	7	6,112	104	1	171	16	8	6,283	120
Total	3,327	830,789	23,566	694	458,914	15,455	4,021	1,284,703	39,021

EXHIBIT Q.—*Material of German ships on January* 1, 1887.

On the 1st January, 1887.	Sailing vessels.			Steamers.			Total.		
	No. ships.	Registered tons, net.	No. crew.	No. ships.	Registered tons, net.	No. crew.	No. ships.	Registered tons, net.	No. crew.
Bolting and sheathing:									
With copper or metal bolts—									
Copper or metal sheathing...	66	37,807	821	.....	.....	.....	66	37,807	821
Without sheathing.....	19	5,436	178	.....	.....	.....	19	5,436	178
With copper or metal bolts and zincked iron bolts—									
Copper or metal sheathing ...	448	220,269	5,351	2	190	21	450	220,459	5,372
Without sheathing.....	52	14,317	463	.....	.....	.....	52	14,317	463
With copper or metal bolts and unzincked iron bolts—									
Copper and metal sheathing..	254	167,883	3,476	1	112	14	255	167,995	3,490
Without sheathing..	121	32,495	1,106	.....	.....	.....	121	32,495	1,106
With zincked iron bolts—									
Copper or metal sheathing ...	.....	.....	.....	1	43	12	1	43	12
Zinc sheathing	6	2,084	60	.....	.....	.....	6	2,084	60
Without sheathing	257	36,802	1,582	4	301	30	261	37,253	1,612
With zincked and unzincked iron bolts—									
Zinc sheathing.....	4	875	35	.....	.....	.....	4	875	35
Without sheathing	135	22,788	939	.....	.....	.....	135	22,788	939
With unzincked iron bolts—									
Zinc sheathing	12	2,775	97	.....	.....	.....	12	2,775	97
Without sheathing.....	1,747	137,351	6,609	3	102	12	1,750	137,453	6,621
Bolting and sheathing unknown..	1	145	6	.....	.....	.....	1	145	6
Vessels entirely of iron.....	205	149,702	2,743	683	458,076	15,366	888	602,778	18,209
Total	3,327	880,789	23,566	694	458,914	15,455	4,021	1,284,703	39,021
Ships with chronometers:									
Only one chronometer.....	1,175	615,729	14,693	293	235,853	6,726	1,468	851,582	21,419
Two chronometers.....	44	48,670	850	91	150,451	5,766	135	199,121	6,616
Total ships with chronometers.	1,219	664,399	15,543	384	386,304	12,492	1,603	1,050,703	28,035

Number and wages of full sailors and apprentices engaged during 1885 *and* 1886.

Years.	Number.	Average wages per month.
1886.		
Full sailors.....	13,301	$10.71
Apprentices.....	1,928	3.35
1885.		
Full sailors.....	12,947	11.09
Apprentices.....	2,069	3.49

EXHIBITS R AND S.—*Account of the shipping employed in the trade of the German Empire, exhibiting the number and tonnage of vessels that entered inward and cleared outward in* 1885.

From and to what countries.	Entered.				Cleared.			
	With cargo.		In ballast or unloaded.		With cargo.		In ballast or unloaded.	
	Number.	Registered tons.	Number.	Registered tons.	Number.	Registered tons.	Number.	Registered tons.
German coasts	29,667	1,498,053	7,645	437,671	28,353	1,464,901	8,806	449,135
Russia	1,497	620,456	51	14,145	981	353,905	1,054	462,196
Sweden	2,508	383,776	255	50,312	1,728	335,383	1,361	333,229
Norway	828	160,997	45	13,684	506	130,886	431	81,957
Denmark	4,467	571,778	2,471	160,990	6,081	655,268	1,142	52,798
Heligoland	352	36,494	83	1,954	325	38,574	118	660
Great Britain	7,029	3,346,540	269	189,120	4,110	2,144,241	2,032	1,263,131
Holland	622	149,259	81	36,379	739	218,412	60	3,873
Belgium	169	78,280	20	13,236	213	108,713	10	10,778
France	266	128,020	43	25,516	600	190,753	9	7,464
Spain	113	76,519	1	420	205	136,302	1	149
Portugal	130	57,801	1	248	118	50,338	.....	.....
Italy	62	52,641	.....	.....	52	44,000	.....	.....
Austria-Hungary	18	14,835	.....	.....	17	14,052	.....	.....
Greece	2	1,101	.....	.....	.....	.....	.....	.....
Roumania	44	46,155	.....	.....	.....	.....	.....	.....
European Turkey	30	31,376	.....	.....	.....	.....	.....	.....
Uncertain	.....	.....	.....	.....	4	411	16	2,120
Whale fishery	53	3,541	.....	.....	53	3,526	1	50
Total Europe, except Germany	18,190	5,759,569	3,320	506,004	15,732	4,424,804	6,235	2,218,400
Greenland	4	1,011	.....	.....	.....	.....	.....	.....
British North America (Atlantic coast)	10	12,245	.....	.....	17	20,898	12	6,667
United States, Atlantic coast	891	1,148,481	1	1,904	724	1,003,554	15	10,829
United States, Pacific coast	3	3,236	.....	.....	2	1,535	.....	.....
Mexico	84	36,969	.....	.....	36	24,395	5	1,620
Central America	23	10,429	.....	.....	5	1,559	1	318
West Indian Islands	204	119,091	.....	.....	74	68,794	4	1,405
South America, Atlantic coast north from Brazil	22	11,614	.....	.....	41	10,307	.....	.....
Brazil	111	116,447	.....	.....	183	144,789	1	276
South America, in the south from Brazil	81	75,364	.....	.....	61	58,990	1	41
Chili	59	53,991	.....	.....	61	51,491	.....	.....
Other South America, Pacific coast	93	70,621	.....	.....	10	6,365	.....	.....
Egypt, Mediterranean coast	2	2,230	.....	.....	.....	.....	.....	.....
Other Africa, Mediterranean coast	7	4,306	.....	.....	5	5,152	.....	.....
Cape Colony, with Natal	2	826	.....	.....	7	2,762	.....	.....
Africa, Atlantic coast	70	57,401	.....	.....	85	67,806	10	3,551
Africa, Red and Indian Sea coasts	11	4,579	.....	.....	9	4,887	1	235
Asia, Mediterranean and Black Sea coasts	3	1,752	.....	.....	3	395	.....	.....
Other anterior Asia	1	1,359	.....	.....	1	1,026	1	579
East Indies, with Indian islands	151	186,111	.....	.....	17	16,330	3	3,415
China	26	26,737	.....	.....	31	34,901	.....	.....
Japan	13	20,726	.....	.....	23	39,268	.....	.....
Other Asia	.....	.....	.....	.....	6	3,322	.....	.....
Australia and islands in the Pacific Sea	25	21,356	.....	.....	58	54,909	.....	.....
Total, not European countries	1,896	1,986,882	1	1,904	1,459	1,623,435	54	28,936
Grand total	49,753	9,244,504	10,966	945,579	45,544	7,513,140	15,095	2,696,471

EXHIBIT T.—*Amount of the trade in the German ports in the year* 1885.

[No later official returns for Germany published.]

Details.	Entered.				Cleared.			
	With cargo.		In ballast or unloaded.		With cargo.		In ballast or unloaded.	
	Vessels.	Registered tons.	Vessels.	Registered tons.	Vessels.	Registered tons.	Vessels.	Registered tons.
Total tonnage of the German Empire employed in the foreign and coasting trade	49,753	9,244,504	10,966	945,579	45,544	7,513,140	15,095	2,696,471
Of which steamers	20,104	7,167,748	1,553	608,367	18,189	5,828,671	3,450	1,947,868
Including—								
German coasting trade	29,667	1,498,053	7,645	437,671	28,353	1,464,901	8,806	449,135
Of which steamers	8,744	910,472	767	232,122	8,703	901,292	738	220,826
Trade between German and European (not German) ports	18,190	5,759,569	8,320	506,004	15,732	4,424,804	6,235	2,218,400
Of which steamers	10,639	5,041,873	785	374,341	8,851	3,848,872	2,708	1,725,175
Trade between German and not European ports	1,896	1,986,882	1	1,904	1,459	1,623,435	54	28,936
Of which steamers	721	1,215,408	1	1,904	635	1,078,507	4	1,867

EXHIBIT U.—*Navigation* (*arranged by flags*).

Flag.	Entered.				Cleared.			
	With cargo.		In ballast or unloaded.		With cargo.		In ballast or unloaded.	
	Number.	Registered tons.	Number.	Registered tons.	Number.	Registered tons.	Number.	Registered tons.
German vessels	37,046	4,650,915	8,460	518,786	35,316	4,208,478	10,105	966,044
Of which steamers	12,945	3,382,167	835	259,403	12,437	3,041,485	1,321	603,659
Foreign vessels	12,707	4,593,589	2,506	426,793	10,228	3,304,662	4,990	1,730,427
Of which steamers	7,159	3,785,581	718	348,964	5,752	2,787,186	2,129	1,344,209
Vessels entered and cleared in 1885.								
Russian	418	107,509	15	2,738	169	48,898	267	62,068
Swedish	2,019	404,315	198	40,954	1,322	318,739	918	132,965
Norwegian	1,110	379,014	113	31,312	780	282,561	448	129,781
Danish	3,843	614,172	1,701	99,048	4,148	607,848	1,395	112,380
British	4,344	2,738,078	334	222,022	2,935	1,741,376	1,761	1,226,697
Dutch	661	138,698	113	11,533	610	135,238	184	14,348
Belgian	5	4,901	2	708	2	2,137	4	3,627
French	184	86,535	1	656	109	65,467	24	20,201
Spanish	82	54,124	28	17,096	102	67,275	6	2,962
Italian	57	35,548			34	19,400	18	12,791
Austro-Hungarian	7	4,024	1	726	4	3,282	3	1,050
Greek	10	11,143					9	9,832
Roumanian								
North American	13	14,703			10	12,053	1	1,085
Other flags	4	825			3	438	2	620

The total loss of German ships in 1886 was 122 (6 steamers), with 39,929 registered tonnage.

SEA-GOING SHIPS OF ALL NATIONS.

A comparison of total numbers and tonnage of ships of all sea-going nations is published by the "Universal Register," of Lloyds:

Country.	1885.		1886.	
	Number.	Tonnage.	Number.	Tonnage.
Great Britain:				
United Kingdom	10,134	9,410,924	9,938	9,015,218
Colonies	3,459	1,754,168	3,294	1,528,953
Total	13,593	11,165,092	13,232	10,539,166
United States	3,980	2,083,092	3,827	2,043,167
Norway	3,651	1,492,413	3,487	1,447,522
Germany	2,353	1,410,114	2,257	1,424,791
France	1,702	1,056,853	1,591	1,020,357
Italy	1,827	900,788	1,852	943,199
Spain	1,056	520,122	1,026	507,025
Sweden	1,551	480,855	1,516	471,609
Russia	1,140	422,300	1,156	425,178
Netherlands	694	419,113	666	397,238
Greece	1,325	343,257	941	269,364
Austria	490	326,670	473	322,382
Denmark	864	270,434	848	265,198
Japan	224	109,403	210	106,499
Chili	159	106,025	169	108,183
Belgium	72	104,867	78	111,035
Portugal	239	73,016	234	75,426
Brazil	202	63,318	499	135,140
Turkey	134	48,008	811	196,625
China	25	32,874	28	37,907
Mexico	26	19,149	24	19,460
Argentine	40	14,318	73	25,764
Peru	25	13,068	23	11,454
Hawaii	25	10,236	26	13,242
Siam	20	7,441	20	7,441
Roumania	4	3,747	4	2,674
Uruguay	9	2,623	20	7,584
Hayti	5	2,396	6	2,575
Sarawak	4	1,382	5	1,557
Montenegro	7	1,179	7	1,179
Bolivia	1	1,032	1	1,032
Persia	1	888	1	888
Costa Rica	3	668	3	668
Venezuela	3	651	5	1,079
Colombia	2	477	2	477
Tahiti	1	244	1	244
Zanzibar	1	213	1	213
Salvador	.....	.....	1	256
Total	35,408	21,507,856	35,124	20,943,650

GERMAN IMPORTS AND EXPORTS.

Special commerce (*i. e.*, exclusive of goods in transit) is shown in the following exhibits (V and W):

EXHIBIT V.—*Values of merchandise imported into the German customs territory during calendar year* 1886 *for consumption.—Special commerce.*

Articles.	Goods imported for consumption.		Increase and decrease in 1886 as compared with 1885.	1886.		1885.		Real increase and decrease in 1886 as compared with 1885.	Probable value of imports in 1886, if same average prices as 1885 would be taken.	Increase and decrease in 1886 as compared with 1885, if the average prices of 1885 are taken for 1886.
	1886.	1885.		Total value.	Percentage of total value.	Total value.	Percentage of total value.			
	Tons.	*Tons.*	*Tons.*							
Animals	190,127	166,825	+ 23,302	$40,757,000	5.81	$35,693,000	5.02	+$5,064,000	$39,967,000	+$4,274,000
Seeds and plants for seed, food, and gardening	112,006	106,606	+ 5,400	6,228,000	0.89	6,141,000	0.86	+ 87,000	6,078,000	− 63,000
Manure and waste materials	661,104	600,094	+ 61,010	13,596,000	1.94	12,856,000	1.81	+ 740,000	14,230,000	+ 1,374,000
Fuel	7,065,878	6,332,961	+732,917	11,784,000	1.68	10,787,000	1.51	+ 997,000	11,997,000	+ 1,210,000
Food and other articles of consumption	2,526,849	3,239,984	−713,135	160,590,000	22.91	176,828,000	24.85	−16,238,000	160,039,000	−16,789,000
Animal food:										
Raw and simply-prepared articles of consumption	242,502	221,360	+ 21,142	20,193,000	2.88	19,260,000	2.71	+ 933,000	21,034,000	+ 1,774,000
Manufactures	53,207	45,218	+ 7,989	11,342,000	1.62	10,361,000	1.46	+ 981,000	12,000,000	+ 1,639,000
Cereals and other farinaceous articles of food:										
Raw materials	1,536,783	2,309,311	−772,528	41,263,000	5.89	64,891,000	9.12	−23,628,000	42,804,000	−22,087,000
Manufactures	163,470	174,121	− 10,651	7,916,000	1.13	9,099,000	1.28	− 1,183,000	8,505,000	− 594,000
Fruit, vegetables, fresh and dried	227,439	189,030	+ 38,409	13,476,000	1.92	11,392,000	1.60	+ 2,084,000	13,303,000	+ 1,911,000
Spices, table-salt, ice-cream	41,501	40,214	+ 1,287	3,854,000	0.55	3,799,000	0.53	+ 55,000	3,808,000	+ 4,000
Coffee and coffee substitutes, cocoa, tea:										
Raw materials	134,817	133,114	+ 1,703	35,239,000	5.03	28,990,000	4.07	+ 6,249,000	30,243,000	+ 1,253,000
Manufactures	1,772	1,724	+ 48	342,000	0.05	259,000	0.04	+ 83,000	301,000	+ 42,000
Sugar, sirup, and molasses	6,201	7,138	− 937	437,000	0.06	544,000	0.08	− 107,000	487,000	− 57,000
Fermented beverages	76,383	77,083	− 700	10,133,000	1.45	11,274,000	1.58	− 1,141,000	10,297,000	− 977,000
Comfits, preserves, and other fine articles of consumption	2,378	2,446	− 68	1,007,000	0.14	1,060,000	0.15	− 53,000	1,027,000	− 33,000
Tobacco and tobacco manufactures:										
Raw materials	39,151	37,998	+ 1,153	12,843,000	1.83	13,262,000	1.86	− 419,000	13,692,000	+ 430,000
Manufactures	1,245	1,227	+ 18	2,543,000	0.36	2,635,000	0.37	− 92,000	2,543,000	− 92,000
Industry of fats, fixed oils, and mineral oils	813,589	890,559	− 76,970	38,395,000	5.48	46,074,000	6.47	− 7,679,000	42,483,000	− 3,591,000
Raw materials	264,100	288,576	− 24,476	14,033,000	2.00	16,373,000	2.33	− 2,340,000	15,228,000	− 1,345,000
Manufactures	549,489	601,983	− 52,494	24,362,000	3.48	29,501,000	4.14	− 5,139,000	27,255,000	− 2,246,000
Raw materials and products of chemical and pharmaceutical industry	836,000	814,731	+ 21,269	48,845,000	6.97	52,596,000	7.39	− 3,751,000	53,559,000	+ 963,000
Raw materials:										
Raw materials of chemical industry	361,905	324,314	+ 37,591	10,052,000	1.43	10,031,000	1.41	+ 21,000	11,459,000	+ 1,428,000
Drugs for medicinal purposes and for perfumes	9,915	9,053	+ 862	4,908,000	0.70	5,572,000	0.78	− 669,000	6,000,000	+ 429,000

Resins, waste for making glue	80,657	74,416	+ 6,241	4,607,000	0.66	4,837,000	0.68	− 230,000	4,720,000	− 117,000
Ferments and finings	20,701	22,457	− 1,756	1,338,000	0.19	1,436,000	0.20	− 98,000	1,422,000	− 14,000
Raw dye-stuffs	90,860	101,128	− 10,268	2,915,000	0.42	3,083,000	0.43	− 168,000	2,895,000	− 188,000
Tanning stuffs, raw	93,658	91,296	+ 2,362	4,285,000	0.61	4,396,000	0.62	− 111,000	4,356,000	− 40,000
Manufactures:										
Simple substances, bases, acids, and salts	81,305	88,555	− 7,250	5,708,000	0.81	5,827,000	0.82	− 119,000	5,971,000	+ 144,000
Ether and volatile oils, medicines and perfumes	6,523	6,285	+ 238	2,229,000	0.32	2,206,000	0.31	+ 23,000	2,421,000	+ 215,000
Resin oils, varnishes, lakes, glutens	13,526	12,879	+ 647	2,166,000	0.31	2,060,000	0.29	+ 106,000	2,158,000	+ 98,000
Explosives and priming goods	1,603	665	+ 938	596,000	0.08	253,000	0.04	+ 343,000	603,000	+ 350,000
Pitch, tar, and distillates of tar	47,693	55,362	− 7,669	2,227,000	0.32	2,788,000	0.39	− 561,000	2,503,000	− 285,000
Stationery, colors	27,654	28,321	− 667	7,817,000	1.12	10,106,000	1.42	− 2,389,000	9,050,000	− 1,056,000
Raw materials and manufactures of asbestos, stone, clay, and glass industry	937,809	924,549	+ 13,260	9,222,000	1.32	9,399,000	1.32	− 177,000	9,264,000	− 135,000
Earths and stones, glass waste	802,990	776,278	+ 26,712	6,072,000	0.87	6,354,000	0.89	− 282,000	6,093,000	− 261,000
Asbestos articles	51	40	+ 11	22,000	0.00	18,000	0.00	+ 4,000	22,000	+ 4,000
Stoneware	8,793	14,748	− 5,955	443,000	0.06	650,000	0.09	− 207,000	440,000	− 210,000
Clay and china ware	117,210	126,005	− 8,795	749,000	0.11	773,000	0.11	− 24,000	767,000	− 6,000
Glassware	8,765	7,478	+ 1,287	1,935,000	0.28	1,605,000	0.23	+ 330,000	1,940,000	+ 335,000
Raw materials and manufactures of metal industry, excepted machines, instruments, and apparatuses	1,221,972	1,341,916	−119,944	41,394,000	5.91	40,339,000	5.67	+ 1,055,000	43,488,000	+ 3,149,000
Ores	974,839	1,041,647	− 66,808	11,665,000	1.66	13,267,000	1.86	− 1,602,000	13,308,000	+ 41,000
Raw metals, not precious, also coined	202,374	252,143	− 49,769	8,481,000	1.21	9,034,000	1.27	− 553,000	8,577,000	− 457,000
Ironware:										
Simply worked articles	25,037	27,604	− 2,567	1,321,000	0.19	1,555,000	0.22	− 234,000	1,349,000	− 206,000
Finished manufactures	16,949	18,088	− 1,139	2,510,000	0.36	2,605,000	0.37	− 95,000	2,565,000	− 40,000
Articles of other metals, not precious:										
Simply worked articles	687	542	+ 145	129,000	0.02	140,000	0.02	− 11,000	148,000	+ 8,000
Finished manufactures	1,747	1,713	+ 34	1,177,000	0.17	1,192,000	0.17	− 15,000	1,199,000	+ 7,000
Precious metals, also coined	339	179	+ 160	16,110,000	2.30	12,545,000	1.76	+ 3,565,000	16,331,000	+ 3,786,000
Raw materials and manufactures of the wood-carving and plaiting industry	1,878,861	2,736,992	−858,131	29,326,000	4.18	36,571,000	5.14	− 7,245,000	29,724,000	− 6,847,000
Building wood and timber, raw	1,140,580	1,669,697	−529,117	6,786,000	0.97	11,705,000	1.65	− 4,919,000	6,786,000	− 4,919,000
Carving and plaiting materials, bristles	34,432	35,860	− 1,428	6,936,000	0.99	6,771,000	0.95	+ 165,000	7,129,000	+ 358,000
Wooden and carved ware:										
Simply worked articles	686,882	1,015,151	−328,269	10,872,000	1.55	13,249,000	1.86	− 2,377,000	11,060,000	− 2,189,000
Finished manufactures	14,750	13,872	+ 878	3,197,000	0.45	3,126,000	0.44	+ 71,000	3,216,000	+ 90,000
Plaited, brush-makers' and sieve-makers' ware	2,217	2,412	− 195	1,535,000	0.22	1,720,000	0.24	− 185,000	1,532,000	− 188,000
Raw materials and manufactures of the paper industry	56,418	51,946	+ 4,472	2,815,000	0.40	2,971,000	0.42	− 156,000	2,974,000	+ 3,000
Raw materials and half stuff	51,022	46,732	+ 4,290	1,733,000	0.25	1,865,000	0.26	− 132,000	1,851,000	− 14,000
Paper and pasteboard	4,443	4,314	+ 129	648,000	0.09	685,000	0.10	− 37,000	678,000	− 7,000
Manufactures of paper and pasteboard	953	900	+ 53	433,000	0.06	421,000	0.06	+ 12,000	445,000	+ 24,000
Raw materials and manufactures of the leather, oil-cloth, and fur goods industry	80,179	82,085	− 1,906	41,883,000	5.98	40,195,000	5.65	+ 1,688,000	43,276,000	+ 3,081,000
Raw hides and skins	68,857	71,183	− 2,326	21,752,000	3.11	23,446,000	3.29	− 1,694,000	22,822,000	− 624,000
Dressed skins; leather; oil-cloth	10,361	9,975	+ 386	16,139,000	2.30	12,973,000	1.82	+ 3,166,000	16,441,000	+ 3,468,000
Leather, harness-makers' and purse-makers' works	871	868	+ 3	3,848,000	0.55	3,669,000	0.52	+ 179,000	3,861,000	+ 192,000
Furs	90	59	+ 31	144,000	0.02	108,000	0.02	+ 36,000	153,000	+ 45,000

EXHIBIT V.—*Values of merchandise imported into the German customs territory during calendar year* 1886, *etc.*—Continued.

Articles.	Goods imported for consumption.		Increase and decrease in 1886 as compared with 1885.	1886.		1885.		Real increase and decrease in 1886 as compared with 1885.	Probable value of imports in 1886, if same average prices as 1885 would be taken.	Increase and decrease in 1886 as compared with 1885, if the average prices of 1885 are taken for 1886.
	1886.	1885.		Total value.	Percentage of total value.	Total value.	Percentage of total value.			
	Tons.	*Tons.*	*Tons.*							
Raw materials and manufactures of the textile and felt industry; clothes	524,177	531,802	− 7,625	$230,053,000	32.82	$213,897,000	30.06	+$16,156,000	$221,263,000	+$7,366,000
Hairs, feathers, and other quilt materials	10,116	8,228	+ 1,888	6,027,000	0.86	5,776,000	0.81	+ 251,000	6,560,000	+ 784,000
Spinning materials	446,220	452,944	− 6,724	121,998,000	17.41	113,630,000	15.97	+ 8,368,000	116,743,000	+ 3,113,000
Yarns and wads	60,251	59,969	+ 282	79,569,000	11.35	67,425,000	9.48	+ 12,144,000	75,039,000	+ 7,614,000
Rope-makers' ware	220	736	− 516	55,000	0.01	175,000	0.02	− 120,000	59,000	− 116,000
Rugs, felts, hair weavings	691	922	− 231	355,000	0.05	449,000	0.06	− 94,000	357,000	− 92,000
Stuffs	5,399	7,654	− 2,255	11,216,000	1.60	13,862,000	1.95	− 2,646,000	11,880,000	− 1,982,000
Hosiery	125	129	− 4	398,000	0.06	395,000	0.06	+ 3,000	382,000	− 13,000
Trimmings and button-makers' ware	144	139	+ 5	450,000	0.06	424,000	0.06	+ 26,000	434,000	+ 10,000
Laces, embroideries, blond-laces	415	531	− 116	5,826,000	0.83	7,465,000	1.05	− 1,639,000	5,651,000	− 1,814,000
Clothes, linen underwear; millinery	319	263	+ 56	1,346,000	0.19	1,311,000	0.18	+ 35,000	1,346,000	+ 35,000
Bonnets; ornamental feathers; flowers; ornamental hair	277	287	− 10	2,813,000	0.40	2,983,000	0.42	− 170,000	2,813,000	− 170,000
Caoutchouc industry	2,989	3,152	− 163	5,324,000	0.76	5,331,000	0.75	− 7,000	5,068,000	− 263,000
Raw materials	2,155	2,366	− 211	3,847,000	0.55	3,942,000	0.55	− 95,000	3,590,000	− 352,000
Manufactures	834	786	+ 48	1,477,000	0.21	1,389,000	0.20	+ 88,000	1,477,000	+ 88,000
Railroad vehicles, upholstered cars and furniture	1,669	796	+ 873	299,000	0.04	202,000	0.03	+ 97,000	361,000	+ 159,000
Engines, machines, and apparatuses	31,845	38,111	− 6,266	7,826,000	1.12	10,486,000	1.47	− 2,660,000	8,204,000	− 2,282,000
Fancy goods and jewelry	566	534	+ 32	6,855,000	0.98	5,833,000	0.82	+ 1,022,000	6,076,000	+ 243,000
Fancy goods and jewelry, except toys	434	396	+ 38	6,808,000	0.97	5,784,000	0.81	+ 1,024,000	6,029,000	+ 245,000
Toys	132	138	− 6	47,000	0.01	48,000	0.01	− 1,000	47,000	− 1,000
Articles of literature and fine arts	3,846	3,687	+ 159	5,706,000	0.81	5,412,000	0.76	+ 294,000	5,706,000	+ 294,000
Sundries, no description										
Total	16,945,884	17,867,330	−921,446	700,902,000	100.00	711,613,000	100.00	− 10,711,000	703,749,000	− 7,864,000

EXHIBIT W.—*Values of merchandise exported from the German customs territory during calendar year* 1886 (*exclusive of goods in direct transit and goods refined and finished.—Special commerce.*)

Articles.	Goods exported.		Increase and decrease in 1886 compared with 1885.	1886.		1885.		Increase and decrease in 1886 compared with 1885.	Value of exports in 1886, priced as in 1885.	Increase and decrease in 1886 compared with 1885.*
	1886.	1885.		Total value.	Percentage of total value.	Total value.	Percentage of total value.			
	Tons.	*Tons.*	*Tons.*							
Animals	163,467	183,077	− 19,610	$23,934,000	3.29	$28,508,000	4.11	—$4,569,000	$24,831,000	—$3,672,000
Seeds and plants for seed, food, and gardening	83,167	74,203	+ 8,964	4,770,000	.66	4,589,000	.66	+ 181,000	4,807,000	— 282,000
Manure and waste materials	137,228	146,536	— 9,308	2,893,000	.40	3,227,000	.47	— 334,000	3,052,000	— 175,000
Fuel	9,725,873	10,005,616	—279,743	22,461,000	3.09	22,551,000	3.25	— 90,000	21,979,000	— 572,000
Food and other articles of consumption	1,708,166	1,678,279	+ 29,887	91,817,000	12.64	97,231,000	14.01	— 5,414,000	100,917,000	+ 3,686,000
Animal food:										
Raw and simply-prepared articles of consumption	38,988	39,548	— 560	5,258,000	.72*	5,787,000	.83	— 529,000	5,483,000	— 304,000
Manufactures	15,855	18,189	— 2,334	5,458,000	.75	6,252,000	.90	— 794,000	5,458,000	— 794,000
Cereals and other farinaceous articles of food:										
Raw materials	262,690	192,546	+ 70,144	5,438,000	.75	3,568,000	.51	+ 1,870,000	5,355,900	+ 1,787,000
Manufactures	190,180	178,857	+ 11,323	8,761,000	1.21	8,950,000	1.29	— 189,000	9,454,000	+ 504,000
Fruit, vegetables, fresh and dried	124,808	149,535	— 24,732	2,761,000	.38	3,273,000	.47	— 512,000	2,722,000	— 551,000
Spices, table-salt, ice-cream	185,027	154,626	+ 30,401	8,637,000	1.19	6,804,000	.98	+ 1,833,000	9,259,000	+ 2,455,000
Coffee and coffee substitutes, cocoa, tea:										
Raw materials	13,505	15,171	— 1,666	476,000	.07	544,000	.08	— 68,000	488,000	— 56,000
Manufactures	3,370	3,714	— 344	215,000	.03	239,000	.04	— 24,000	214,000	— 25,000
Sugar, sirup, and molasses	628,908	685,321	— 11,418	35,408,000	4.87	40,373,000	5.82	— 4,965,000	42,808,000	+ 2,430,000
Fermented beverages	238,757	276,838	— 38,081	16,431,000	2.26	17,608,000	2.55	— 1,267,000	16,699,000	— 999,000
Comfits, preserves, and other fine articles of consumption	6,789	6,637	+ 152	1,598,000	.22	1,528,000	.22	+ 70,000	1,598,000	+ 70,000
Tobacco and tobacco manufactures:										
Raw materials	2,971	5,375	— 2,404	501,000	.07	1,029,000	.15	— 528,000	501,000	— 528,000
Manufactures	1,328	1,922	— 594	878,000	.12	1,189,000	.17	— 311,000	887,000	— 302,000
Industry of fats, fixed oils, and mineral oils	62,392	63,556	— 1,164	5,795,000	.80	6,159,000	.89	— 364,000	6,444,000	+ 285,000
Raw materials	29,425	32,314	— 2,889	1,620,000	.22	1,891,000	.27	— 271,000	1,741,000	— 150,000
Manufactures	32,967	31,242	+ 1,725	4,175,000	.58	4,268,000	.62	— 93,000	4,708,000	+ 435,000
Raw materials and products of chemical and pharmaceutical industry	597,361	626,497	— 29,136	51,022,000	7.03	52,411,000	7.56	— 1,389,000	55,308,000	+ 2,892,000
Raw materials:										
Raw materials of chemical industry	171,463	206,554	— 35,091	1,377,000	.19	1,679,000	.24	— 302,000	1,464,000	— 215,000
Drugs for medicinal purposes and for perfumes	2,550	2,835	— 285	1,321,000	.18	1,377,000	.20	— 56,000	1,318,000	— 59,000
Resins, waste for making glue	22,187	20,234	+ 1,953	987,000	.13	911,000	.13	+ 26,000	989,000	+ 78,000
Ferments and finings	5,370	5,710	— 340	716,000	.10	752,000	.11	— 36,000	746,000	— 6,000

* The exports of 1886 being valued at the same prices as in 1885.

EXHIBIT W.—*Values of merchandise exported from the German customs territory during calendar year* 1886, *etc.*—Continued.

Articles.	Goods exported.		Increase and decrease in 1886 compared with 1885.	1886.		1885.		Increase and decrease in 1886 compared with 1885.	Value of exports in 1886, priced as in 1885.	Increase and decrease in 1886 compared with 1885.*
	1886.	1885.		Total value.	Percentage of total value.	Total value.	Percentage of total value.			
Raw materials—Continued.	*Tons.*	*Tons.*	*Tons.*							
Raw dye-stuffs	49,247	45,420	+ 3,827	$1,178,000	.16	$1,163,000	.17	+ $15,000	$1,195,000	+ $32,000
Tanning stuffs, raw	4,575	4,582	— 7	163,000	.02	184,000	.03	— 21,000	169,000	— 15,000
Manufactures:										
Simple substances, bases, acids, and salts	205,988	204,262	+ 1,676	11,359,000	1.56	11,530,000	1.66	— 171,000	11,808,000	+ 278,000
Ether and volatile oils, medicines and perfumes	28,778	30,133	— 1,355	6,575,000	.91	6,543,000	.94	+ 32,000	7,141,000	+ 598,000
Resin oils, varnishes, lakes, glutens	15,337	11,611	+ 3,726	2,316,000	.32	2,029,000	.29	+ 287,000	2,414,000	+ 385,000
Explosives and priming goods	8,854	9,412	— 558	3,904,000	.54	4,462,000	.65	— 558,000	4,025,000	— 437,000
Pitch, tar, and distillates of tar	27,602	30,476	— 2,874	1,723,000	.24	2,001,000	.29	— 278,000	2,109,000	+ 108,000
Stationery, colors	55,460	55,268	+ 192	19,452,000	2.68	19,779,000	2.85	— 327,000	21,925,000	+ 2,146,000
Raw materials and manufactures of asbestos, stone, clay, and glass industry	2,153,606	1,935,781	+217,825	24,300,000	3.35	23,327,000	3.36	+ 973,000	25,067,000	+ 1,740,000
Earths and stones, glass waste	1,223,896	1,159,874	+ 64,022	7,040,000	.97	6,829,000	.99	+ 211,000	7,040,000	+ 211,000
Asbestos articles	113	38	+ 75	51,000	.01	18,000	.00	+ 33,000	51,000	+ 33,000
Stoneware	87,141	34,153	+ 2,988	1,336,000	.19	1,403,000	.20	— 67,000	1,461,000	+ 58,000
Clay and chinaware	808,232	659,946	+148,286	7,645,000	1.05	7,231,000	1.04	+ 414,000	8,209,000	+ 978,000
Glassware	84,224	81,770	+ 2,454	8,227,000	1.13	7,845,000	1.13	+ 382,000	8,307,000	+ 462,000
Raw materials and manufactures of metal industry, except machines, instruments, and apparatuses	3,226,528	2,999,826	+226,697	84,792,000	11.66	80,025,000	11.54	+ 4,767,000	89,028,000	+ 9,003,000
Ores	1,864,778	1,797,990	+ 66,788	2,127,000	.29	2,426,000	.35	— 299,000	2,574,000	+ 148,000
Raw metals, not precious, also coined	458,856	394,082	+ 64,774	12,808,000	1.76	11,974,000	1.73	— 834,000	12,878,000	+ 904,000
Ironware:										
Simply worked articles	504,805	411,710	+ 93,095	14,387,000	1.98	12,463,000	1.80	+ 1,924,000	15,158,000	+ 2,695,000
Finished manufactures	360,792	361,650	— 858	26,987,000	3.71	28,873,000	4.16	— 1,886,000	29,349,000	+ 476,000
Articles of other metals not precious:										
Simply worked articles	24,035	22,643	+ 1,392	3,223,000	.45	2,992,000	.43	+ 231,000	3,360,000	+ 368,000
Finished manufactures	12,818	11,425	+ 1,393	9,269,000	1.28	8,016,000	1.16	+ 1,253,000	9,344,000	+ 1,328,000
Precious metals also coined	449	326	+ 123	16,040,000	2.21	13,280,000	1.91	+ 2,760,000	16,364,000	+ 3,084,000
Raw materials and manufactures of the wood-carving and plaiting industry	545,625	598,512	— 52,887	24,819,000	3.42	25,272,000	3.64	— 453,000	25,844,000	+ 572,000
Building wood and timber, raw	248,338	291,822	— 43,484	2,089,000	.29	2,566,000	.37	— 497,000	2,089,000	— 497,000
Carving and plaiting materials, bristles	9,487	10,824	— 1,337	4,098,000	.56	4,140,000	.60	— 42,000	4,123,000	— 17,000
Wooden and carved ware:										
Simply worked articles	242,967	254,948	— 11,981	4,656,000	.64	4,312,000	.62	+ 344,000	4,470,000	— 158,000
Finished manufactures	39,682	35,804	+ 3,878	12,216,000	1.68	12,612,000	1.82	— 396,000	13,411,000	+ 799,000
Plaited, brush-makers', and sieve-makers' ware	5,131	5,114	+ 17	1,760,000	.25	1,642,000	.23	+ 188,000	1,773,000	+ 131,000

Raw materials and manufactures of the paper industry	152,694	139,280	+ 13,414	19,398,000	2.66	18,967,000	2.73	+ 431,000	19,972,000	+ 1,015,000
Raw materials and half stuff	78,795	68,353	+ 10,442	3,555,000	.49	3,059,000	.44	+ 496,000	3,569,000	+ 510,000
Paper and pasteboard	63,932	61,364	+ 2,568	12,068,000	1.66	12,221,000	1.76	— 153,000	12,567,000	+ 346,000
Manufactures of paper and pasteboard	9,967	9,563	+ 404	3,715,000	.51	3,677,000	.53	+ 38,000	3,836,000	+ 159,000
Raw materials and manufactures of the leather, oil-cloth and fur-goods industry	33,914	31,024	+ 2,890	58,398,000	8.04	52,338,000	7.54	+ 6,055,000	59,179,000	+ 6,841,000
Raw hides and skins	17,045	15,403	+ 1,642	6,701,000	.92	6,112,000	.88	+ 589,000	6,947,000	+ 835,000
Dressed skins, leather, oil-cloth	9,500	8,966	+ 534	18,878,000	2.60	17,035,000	2.45	+ 1,843,000	19,300,000	+ 2,265,000
Leather, harness-makers' and purse-makers' works	7,064	6,461	+ 603	31,887,000	4.39	28,630,000	4.13	+ 3,257,000	31,951,000	+ 3,321,000
Furs	305	194	+ 111	925,000	.13	560,000	.08	+ 366,000	981,000	+ 421,000
Raw materials and manufactures of the textile and felt industry, clothes	208,004	209,386	— 1,382	242,096,000	33.33	209,840,000	30.24	+23,196,000	236,263,000	+26,423,000
Hairs, feathers, and other quilt materials	5,465	4,768	+ 697	4,909,000	.68	4,421,000	.64	+ 488,000	4,775,000	+ 354,000
Spinning materials	105,658	117,386	— 11,728	28,386,000	3.90	26,556,000	3.83	+ 1,780,000	26,395,000	— 161,000
Yarns and wads	18,378	16,637	+ 1,741	25,714,000	3.54	22,264,000	3.21	+ 3,450,000	24,188,000	+ 1,924,000
Rope-maker's ware	4,009	3,708	+ 301	913,000	.13	804,000	.11	+ 109,000	866,000	+ 62,000
Rugs, felts, hair weavings	2,160	1,911	+ 249	1,681,000	.23	1,463,000	.21	+ 218,000	1,685,000	+ 222,000
Stuffs	46,599	42,419	+ 4,180	97,176,000	13.38	85,777,000	12.36	+11,399,000	97,257,000	+11,480,000
Hosiery	11,770	9,879	+ 1,891	25,270,000	3.48	20,964,000	3.02	+ 4,306,000	24,754,000	+ 3,790,000
Trimmings, button-makers' ware	5,594	5,430	+ 164	13,550,000	1.87	11,194,000	1.61	+ 2,356,000	11,402,000	+ 209,000
Laces, embroideries, blond laces	1,025	721	+ 304	14,128,000	1.94	9,146,000	1.32	+ 4,982,000	14,105,000	+ 4,959,000
Clothes, linen underwear, millinery	6,519	5,750	+ 769	23,143,000	3.19	20,656,000	2.98	+ 2,487,000	23,218,000	+ 2,562,000
Bonnets, ornamental feathers, flowers, ornamental hair	827	777	+ 50	7,216,000	.99	6,595,000	.95	+ 621,000	7,617,000	+ 1,022,000
Caoutchouc industry	3,074	2,969	+ 105	5,525,000	.76	5,359,000	.77	+ 166,000	5,502,000	+ 143,000
Raw materials	179	136	+ 43	341,000	.05	243,000	.03	+ 98,000	320,000	+ 77,000
Manufactures	2,895	2,833	+ 62	5,184,000	.71	5,116,000	.74	+ 68,000	5,182,000	+ 66,000
Railroad vehicles, upholstered cars and furniture	8,519	5,921	+ 2,598	666,000	.09	1,040,000	.15	— 380,000	1,391,000	+ 351,000
Engines, machines, and apparatuses	86,840	88,064	— 1,224	27,224,000	3.75	28,949,000	4.17	— 1,725,000	28,295,000	— 654,000
Fancy goods and jewelry	15,996	13,909	+ 2,087	21,554,000	2.97	19,233,000	2.77	+ 2,321,000	21,951,000	+ 2,718,000
Fancy goods and jewelry, **except toys**	2,754	3,214	— 460	16,965,000	2.34	15,603,000	2.25	+ 1,362,000	17,188,000	+ 1,585,000
Toys	13,242	10,695	+ 2,547	4,589,000	.63	3,630,000	.52	+ 759,000	4,762,000	+ 1,132,000
Articles of literature and fine arts	11,745	11,509	+ 236	14,780,000	2.03	14,719,000	2.12	+ 61,000	14,780,000	+ 61,000
Sundries, no description	89	78	+ 11	118,000	.01	102,000	.02	+ 11,000	117,000	+ 15,000
Total	18,924,283	18,814,023	+110,260	726,226,000	100.00	698,831,000	100.00	+32,395,000	744,294,000	+50,398,000

* The exports of 1886 being valued at the same prices as in 1885.

General commerce in 1886 (*i. e.*, inclusive of goods in transit) was as follows:

Description.	1886.	1885.
Imports:		
Volume.....tons..	19,806,565	20,474,654
Value.....marks..	4,421,590,000	4,430,345,000
Exports:		
Volume.....tons..	21,482,972	21,643,219
Value.....marks..	4,580,095,000	4,399,908,000

The German statistical bureau gives in relation to these figures the following comment:

The figures as given in these tables, showing "special commerce," deserve most attention, as they most approximately express the amount of goods imported for home consumption and of goods manufactured in Germany and exported. Thus a comparison between "special" imports and "special" exports shows that Germany's exports exceeded imports by 106,400,000 marks ($25,290,000), inclusive of declared value of gold and silver in bullion, hence exclusive of the latter item by about 91,100,000 marks ($21,684,000).

Exhibit X shows Germany's trade with foreign countries in 1886 generally:

EXHIBIT X.—*Germany's trade with foreign countries in* 1886 (*special commerce*).

Countries.	Imports.		Exports.	
	Volume.	Value.	Volume.	Value.
	Kilograms.		*Kilograms.*	
Via Bremen	381,998,200	$33,566,000	762,577,100	$29,077,000
Via Hamburg-Altona	1,628,285,700	90,016,000	2,301,958,200	153,494,000
Other German parts not included in the Zollverein	32,679,300	604,000	53,886,200	576,000
Belgium	874,356,300	67,516,000	2,210,509,600	36,862,000
Bulgaria	498,000	34,000	1,745,500	534,000
Denmark	92,763,900	5,264,000	161,998,700	10,735,000
France, Algeria	490,411,900	53,267,000	2,531,182,200	60,298,000
Greece	2,678,200	287,000	5,400,100	555,000
Great Britain	2,423,635,400	107,797,000	736,568,700	105,452,000
Italy	73,730,700	21,836,000	204,914,000	21,176,000
Netherlands	939,698,500	51,328,000	3,952,732,500	55,698,000
Norway	95,019,400	2,644,000	39,111,700	2,715,000
Austria-Hungary	6,517,341,200	98,024,000	3,421,700,000	69,905,000
Portugal	13,249,500	630,000	12,730,800	1,409,000
Roumania	16,029,000	468,000	37,151,600	5,220,000
Russia	1,901,625,300	62,928,000	697,800,700	35,179,000
Sweden	276,862,000	4,849,000	128,907,500	12,387,000
Switzerland	144,060,700	37,076,000	1,098,531,200	38,392,000
Servia	6,803,000	406,000	8,817,600	638,000
Spain	464,080,000	3,488,000	74,054,700	8,249,000
European and Asiatic Turkey	6,206,400	552,000	6,968,900	2,177,000
Egypt	4,911,800	2,360,000	1,349,200	3,277,000
Africa	18,238,100	1,359,000	3,896,300	991,000
British Indies	36,768,900	4,912,000	6,268,000	1,495,000
China	1,184,800	494,000	16,591,600	2,968,000
Japan	286,100	82,000	16,342,900	983,000
East Indian Islands	2,836,500	706,000	8,944,700	1,260,000
Other Asia	58,700	8,000	1,409,600	143,000
Argentine Republic	30,009,100	11,248,000	35,778,200	3,161,000
Brazil	3,979,700	996,000	16,645,900	40,282,000
British North America	893,500	25,000	9,135,900	894,000
Chili	73,084,000	3,176,000	2,880,400	1,045,000
Mexico and Central America	7,135,800	1,695,000	1,809,900	980,000
Peru	7,071,200	2,080,000	668,400	443,000
United States of America	352,589,600	25,296,000	318,518,600	50,348,000
West Indian Archipelago	18,208,800	587,000	2,682,400	452,000
Other America	3,155,100	988,000	8,760,000	1,234,000
Australia	9,760,400	2,885,000	23,319,400	1,714,000
Other countries not mentioned	8,694,500	59,000	150,500	15,000
Total	16,945,884,000	700,902,000	18,734,283,400	726,226

Of course, as long as the free ports of Hamburg and Bremen appear among foreign items no reliable and precise figures can be arrived at as to the real state of things. Germany's trade, particularly with South American countries, will be found for Argentine Republic and Uruguay and Paraguay (no separate statements being published) in Exhibit Y:

EXHIBIT Y.—*Trade with the Argentine Republic (special commerce) for* 1886.

Articles.	Imports.		Exports.	
	Volume.	Value.	Volume.	Value.
	Kilograms.		*Kilograms.*	
Waste	5,409,800	$121,000		
Cotton, and cotton goods			499,900	$649,000
Lead, and lead articles			4,700	4,000
Brush-makers' and sieve-makers' wares			1,600	2,000
Drugs, apothecary's ware, dye-stuffs	721,400	22,000	261,200	85,000
Iron and ironware			31,468,700	4,489,000
Earths, ores, precious metals, asbestos, etc	68,400	53,000	204,500	2,000
Grain and other agricultural produce	80,000	700	178,800	11,000
Glass and glassware			495,900	31,000
Hair of horses and men, etc., feathers, bristles			200	400
Hides and skins	1,082,900	320,000		
Wood, etc., and manufactures thereof	95,300	13,000	119,300	53,000
Hops			13,800	6,000
Instruments, machines, and vehicles			774,900	208,000
Almanacs			800	400
Caoutchouc, gutta-percha, and articles			1,500	4,000
Clothes and linen underwear, also millinery			11,700	60,000
Copper, etc., and manufactures			21,300	21,000
Fancy goods, etc			15,900	357,000
Leather, and leather goods			53,600	130,000
Linen, and linen yarn, and other linen goods			19,400	60,000
Articles of literature and art			16,400	24,000
Groceries, spices, confectionery	13,800	16,000	1,019,500	80,000
Oils, not otherwise described, and fats	204,900	25,000	2,200	400
Papers and pasteboard goods			198,800	50,000
Furs			100	400
Petroleum			200	
Silk and silk goods			11,300	68,000
Soap and perfumes			17,800	10,000
Play-cards			100	
Stone, and stoneware			26,000	1,000
Straw, and bast ware			200	5,000
Tar, pitch, resins, asphaltum			800	200
Animals and animal products, not otherwise mentioned	300		300	200
Clay articles			182,200	31,000
Cattle			2,500	200
Oil-cloth, wax muslin, wax taffeta			3,800	2,000
Wool and woolen goods	22,482,300	10,677,000	144,000	268,000
Zinc and zinc goods			5,100	3,000
Tin and tin goods			500	400
Goods incompletely declared			3,700	2,000
Total for 1886	30,009,100	11,248,000	35,778,200	8,161,000

EXHIBIT Z.—*Trade with Brazil for* 1886 (*special commerce*).

Articles.	Imports.		Exports.	
	Volume.	Value.	Volume.	Value.
	Kilograms.		*Kilograms.*	
Waste	21,300	$700		
Cotton and cotton goods	200		795,300	$635,000
Lead and lead articles			31,300	2,600
Brush-makers and sieve-makers' wares			1,300	1,000
Drugs, apothecary's ware, dye-stuffs	390,800	33,000	275,400	74,000
Iron and ironware	1,400		10,552,300	458,000
Earths, ores, precious metals, asbestos, etc	46,300	18,000	494,100	4,000
Flax and other vegetable spinning stuffs	14,500	2,000		
Grain and other agricultural produce	410,400	12,000	245,700	16,000
Glass and glassware			54,400	12,000
Hair of horses, and human, etc., feathers, bristles	19,400	11,000	500	4,000

EXHIBIT Z.—*Trade with Brazil for* 1886—Continued.

Articles.	Imports.		Exports.	
	Volume.	Value.	Volume.	Value.
	Kilograms.		*Kilograms.*	
Hides and skins	169,000	$68,000		
Wood, etc., and manufactures	187,700	9,000	579,300	$26,000
Hops			40,900	18,000
Instruments, machines, vehicles			507,500	159,000
Almanacs			400	200
Caoutchouc and gutta-percha			2,400	6,000
Clothes and linen underwear, also millinery			20,200	85,000
Copper, etc., and manufactures	100		25,500	22,000
Fancy goods			25,900	1,277,000
Leather and leather goods			46,900	126,000
Linen and linen yarn, and other linen goods			223,500	68,000
Candles	100			
Articles of art and literature	300	200	16,500	22,000
Groceries, spices, confectionery	2,610,300	730,000	784,600	67,000
Oil, not otherwise mentioned, and fats	500		18,700	2,000
Paper and pasteboard ware			498,300	94,000
Silk and silk goods			14,300	107,000
Soap and perfumes	100		21,800	18,000
Stone and stoneware	3,300	40,000	5,500	400
Pit coals, peats, coke, etc	300		330,000	700
Straw and bast ware			200	900
Tar, pitch, resins, asphaltum			100	
Animal and animal products, not otherwise mentioned	300		300	300
Clay articles	100		825,200	111,000
Oil-cloth, wax muslin, wax taffeta			4,600	2,000
Wool and woolen goods	153,300	72,000	182,300	412,000
Zinc and zinc goods			30,700	4,000
Tin and tin goods			3,400	2,600
Articles not fully declared			6,100	15,000
Total	3,979,700	995,000	16,645,900	4,032,000

EXHIBIT A A.—*Trade with Chili (special commerce) for* 1886.

Articles.	Import.		Export.	
	Volume.	Value.	Volume.	Value.
	Kilograms.		*Kilograms.*	
Waste	1,000			
Cotton and cotton goods			589,000	$560,000
Lead and lead articles			7,000	400
Brush-makers' and sieve-makers' ware			500	400
Drugs, apothecaryies articles, dye-stuffs	71,822,000	$3,079,000	105,100	19,500
Iron and iron ware			1,457,200	72,000
Earths, ores, precious metals, asbestos	222,800	40,000	85,000	700
Grain, and other agricultural produce	907,900	87,000	500	
Glass and glassware			24,000	2,000
Wood, etc., manufactures	36,900	5,000	13,300	7,000
Hops			36,000	15,000
Instruments, machines, and vehicles			65,800	20,000
Caoutchouc, and gutta-percha			5,400	13,000
Clothes and linen underwear, also millinery			4,700	17,000
Copper, etc., and manufactures	68,800	14,000	4,100	3,000
Fancy goods			2,000	18,000
Leather and leather goods			24,000	48,000
Linen and linen yarn, and other linen goods			19,300	5,000
Articles of art and literature			24,300	21,000
Groceries, spices, confectionery	14,600	1,000	74,400	11,000
Oil, not otherwise mentioned, and fats			700	200
Paper and pasteboard ware			57,900	13,000
Petroleum			200	
Silk and silk goods			5,300	41,000
Soap and perfumes			17,300	19,000
Stone and stoneware			9,300	400
Tar, pitch, resins, asphaltum			300	
Clay articles			195,300	25,000
Wool and woolen goods			57,000	109,000
Zinc and zinc goods			300	400
Tin and tin goods			1,400	1,000
Goods not fully declared			300	200
Total	73,084,000	3,715,000	2,889,400	1,045,000

EXHIBIT B B.—*Trade with Mexico and Central America for* 1886 (*special commerce*).

Articles.	Import.		Export.	
	Volume.	Value.	Volume.	Value.
	Kilograms.		*Kilograms.*	
Waste	1,400			
Cotton and cotton yarn			158,100	$185,000
Lead and lead articles	200		400	200
Brush-makers' and sieve-makers' ware			600	700
Drugs, apothecaries' goods, dye-stuffs	130,100	$4,000	335,700	161,000
Iron and iron ware			560,700	58,000
Earths, ores, precious metals, asbestos, etc	3,923,800	1,480,000	198,000	1,600
Flax and other vegetable spinning stuffs	81,900	13,000		
Grain and other agricultural produce	100		300	
Glass and glassware			8,700	2,600
Hides and skins	22,000	9,000		
Wood, etc	2,907,000	166,000	13,400	6,000
Hops			11,100	5,000
Instruments, machines, and vehicles			72,900	42,000
Caoutchouc and gutta percha			1,900	4,000
Clothes and linen underwear, also millinery			2,500	19,000
Copper, etc., manufactures			17,300	20,000
Fancy goods			6,100	139,000
Leather and leatherware			23,700	54,000
Linen and linen yarn and other linen goods			7,400	31,000
Articles of art and literature			3,100	6,000
Groceries, spices, confectionery	59,100	23,000	200,000	21,000
Oil, not otherwise mentioned, and fats			2,300	700
Paper and pasteboard ware			17,000	6,000
Silk and silk goods			2,300	17,000
Soap and perfume			4,100	4,000
Stone and stoneware	9,900	400	6,300	200
Straw and bast ware				700
Clay articles			100,100	15,000
Oil-cloth, wax muslin, wax taffeta			700	400
Wool and woolen goods			52,500	159,000
Zinc and zinc goods			5,600	1,400
Tin and tin goods			1,400	1,400
Goods not fully declared			700	400
Total	7,135,600	1,695,000	1,809,900	960,000

EXHIBIT C C.—*Trade with Peru* (*special commerce*) *for* 1886.

Articles.	Import.		Export.	
	Volume.	Value.	Volume.	Value.
	Kilograms.		*Kilograms.*	
Waste	2,335,900	$72,000		
Cotton and cotton goods			169,600	$182,000
Lead and lead articles	4,800	200	200	
Brush-makers' and sieve-makers' ware			400	400
Drugs, apothecaries' goods, dye-stuffs	29,300	3,000	31,700	1,300
Iron and iron ware	2,900	200	185,900	17,100
Earths, ores, precious metals, asbestos	4,690,500	1,958,000		
Glass and glassware			2,500	400
Hides and skins	3,600	900		
Wood, etc., and manufactures			5,600	3,000
Hops			12,500	5,400
Instruments, machines, and vehicles			5,900	4,500
Caoutchouc and gutta-percha, also articles			500	1,100
Clothes and linen underwear, also millinery			2,600	13,500
Copper, etc., and manufactures			2,700	3,000
Fancy goods			2,000	10,400
Leather and leather goods			10,600	21,000
Linen and linen yarn and other linen goods			2,000	400
Articles of art and literature			43,200	37,000
Fancy goods	200		108,300	5,200
Oil, not otherwise mentioned, and fats			800	200
Paper and pasteboard ware			17,100	5,400
Silk and silk goods			2,900	19,200
Soap and perfumes			6,600	5,400
Stone and stoneware			1,600	
Pit coals	3,900			

EXHIBIT C C.—*Trade with Peru (special commerce) for* 1886—Continued.

Articles.	Import.		Export.	
	Volume.	Value.	Volume.	Value.
	Kilograms.		*Kilograms.*	
Tar, pitch, resins, asphaltum			3,000	$200
Clay articles			6,800	900
Oil-cloth, wax muslin, wax taffeta			100	
Wool and woolen goods	100		48,500	91,100
Zinc and zinc goods			1,400	400
Tin and tin goods			600	400
Goods not fully declared			500	200
Total	7,071,200	$2,029,000	668,400	443,000

EXHIBIT D D.—*Trade with the West Indian Archipelagoes (special commerce) for* 1886.

Articles.	Import.		Export.	
	Volume.	Value.	Volume.	Value.
	Kilograms.		*Kilograms.*	
Cotton and cotton goods			50,600	$70,000
Lead and lead articles			2,400	700
Brush-makers' and sieve-makers' ware			800	200
Drugs, apothecaries' goods, dye-stuffs	3,589,500	$112,000	35,800	5,000
Iron and iron ware			1,454,700	97,000
Earths, ores, precious metals, asbestos, etc	8,612,800	164,000	80,900	200
Flax and other vegetable spinning stuffs	12,600	2,000		
Grain and other agricultural produce	1,400	200	32,200	1,000
Glass and glassware			105,900	9,000
Hides and skins	9,400	2,000		
Wood, etc., and manufactures	906,300	52,000	21,200	7,000
Instruments, machines, vehicles	15,000	2,000	151,000	42,000
Caoutchouc and gutta-percha			800	2,000
Clothes and linen underwear, also millinery			800	3,000
Copper, etc., and manufactures			6,000	6,000
Fancy goods		1,000	3,400	30,000
Leather and leather goods			8,400	24,000
Linen and linen yarn and other linen goods			10,900	9,000
Articles of art and literature			3,100	4,000
Groceries, spices, confectionery	269,600	195,000	235,800	14,000
Paper and pasteboard ware			138,200	39,000
Silk and silk goods			200	3,000
Soap and perfumes			3,800	3,000
Stone and stoneware			6,200	400
Pit coals, peats, coke, etc			29,500	
Tar, pitch, resins, asphaltum	4,791,000	57,000		
Animal and animal products, not otherwise mentioned			500	200
Clay articles			330,200	45,000
Oil-cloth, wax muslin, wax taffeta			1,200	1,000
Wool and woolen goods			19,400	34,000
Zinc and zinc goods			2,200	1,000
Tin and tin goods			900	1,000
Articles not fully declared			1,400	1,000
Total	18,208,300	587,000	2,682,400	452,000

EXHIBIT E E.—*Trade with the United States for* 1886 (*special commerce*).

Articles.	Import.		Export.	
	Volume in 100 kilograms.	Value.	Volume in 100 kilograms.	Value.
Waste	1,821	$4,000	80,828	$292,000
Cotton and cotton goods	505,620	11,909,000	39,978	8,079,000
Lead and lead articles	3	200	8,673	53,000
Brush-makers' and sieve-makers' ware	6	200	25	3,000
Drugs, apothecaries' goods, dye-stuffs	73,028	695,000	241,534	3,389,000
Iron and iron ware	1,672	34,000	1,506,716	3,731,000
Earths, ores, precious metals, asbestos, etc	51,244	148,000	635,111	498,000
Flax and other vegetable spinning stuffs	740	11,000	1,055	16,000
Grain and other agricultural produce	398,069	161,000	4,365	30,000
Glass and glassware	43	2,000	81,548	1,969,000
Hair of horses and human, etc., feathers, bristles	145	100,000	398	105,000
Hides and skins	7,676	584,000	2,295	405,000
Wood, etc., and manufactures	173,106	395,000	12,627	305,000
Hops	1	.....	31,931	1,368,000
Instruments, machines, vehicles	3,377	74,000	5,515	400,000
Almanacs	.....	.....	14	700
Caoutchouc and gutta-percha	331	65,000	146	18,000
Clothes and linen underwear, also millinery	5	2,000	3,925	1,891,000
Copper, etc., and manufactures	1,410	31,000	3,217	328,000
Fancy goods	34	50,000	7,408	406,000
Leather and leather goods	1,328	77,000	4,864	1,791,000
Linen and linen yarn and other linen goods	9	400	3,572	2,075,000
Candles	.....	.....	10	200
Articles of art and literature	374	46,000	6,349	633,000
Groceries, spices, confectionery	45,050	871,000	324,665	2,572,000
Oil, not otherwise mentioned, and fats	248,080	2,650,000	2,326	24,000
Paper and pasteboard ware	369	9,000	19,564	786,000
Furs	1	200	11	3,000
Petroleum	1,766,116	5,507,000	12	.....
Silk and silk goods	37	21,000	19,227	12,966,000
Soap and perfumes	153	3,000	431	29,000
Play cards	1	.....	.....	.....
Stone and stone ware	120	44,000	16,368	162,000
Pit coals, peats, coke, etc	2	.....	14,180	4,000
Straw and bast ware	2	.....	535	6,000
Tar, pitch, resins, asphaltum	237,770	569,000	24,263	29,000
Animals and animal products not otherwise mentioned	7,599	181,000	294	11,000
Clay articles	217	2,000	28,221	392,000
Cattle	1	.....	36	2,000
Oil-cloth, wax muslin, wax taffeta	12	700	11	700
Wool and woolen goods	444	46,000	28,930	5,915
Zinc and zinc goods	10	.....	22,776	191,000
Tin and tin goods	.....	.....	84	3,000
Articles not fully declared	.....	.....	1,198	62,000
Total for 1886	3,525,896	25,296,000	185,186	50,348,000

All these statements were taken from official statistics and apply to the calendar year 1886, while exhibits F F and G G show for the year ending September 30, 1887, exports from Berlin and from the whole district of the consulate-general, Berlin, to the United States, prepared from our consul's digests of invoice books.

EXHIBIT F F.—*Value of declared exports from the consular district of Berlin to the United States during the four quarters of the year ending September* 30, 1886.

Articles.	Fourth quarter, 1885.	First quarter, 1886.	Second quarter, 1886.	Third quarter, 1886.	Total.
Albums	$61,086.54	$32,385.85	$142,971.09	$320,546.65	$564,940.13
Amber	.....	778.43	788.98	500.99	2,068.39
Animals (oxen)	1,025.78	.....	.....	.....	1,025.78
Art, works of	.....	.....	1,395.63	3,668.67	5,064.30
Artificial flowers	2,685.72	3,132.17	764.69	984.19	7,566.77
Baskets, caneware	534.07	352.78	655.69	5,318.71	6,861.25
Books	2,917.95	3,489.53	6,669.75	4,888.34	17,965.57
Bristles, brushes, horse-hair	2,013.44	6,716.40	7,160.39	11,452.88	27,343.06
Buttons (glass, metal, wooden)	10,515.33	25,967.00	19,749.66	25,166.14	80,398.13
Buttons, vegetable ivory	5,228.65	6,549.23	9,852.00	7,178.32	29,508.20

EXHIBIT F F.—*Value of declared exports, etc.*—Continued.

Articles.	Fourth quarter, 1885.	First quarter, 1886.	Second quarter, 1886.	Third quarter, 1886.	Total.
Chemicals, drugs, dyes, ink	$63,988.91	$35,510.25	$48,145.21	$55,768.48	$203,412.85
Chromos	2,847.28	4,463.83	5,524.99	1,664.52	14,500.57
Colors	26,885.67	11,541.97	12,883.70	7,967.91	59,279.25
Colors, aniline	.....	22,295.07	22,888.97	19,099.16	64,283.20
Dress and piece goods:					
Cotton and cotton-mixed goods	4,807.00	523.18	8,787.50	5,103.76	19,221.44
Linen and linen-mixed goods	5,963.68	9,277.47	2,809.83	1,044.70	19,095.68
Silk and silk-mixed goods	1,180.90	2,891.19	3,259.36	1,616.43	8,947.88
Velvet and plush goods	35,216.86	82,502.24	245,146.24	205,638.76	568,504.10
Woolen and woolen-mixed goods	66,771.95	78,825.61	204,502.40	186,913.54	537,013.50
Earthenware	2,243.71	.....	836.66	666.56	3,746.93
Embroideries, crochet covers	20,800.58	32,026.70	10,661.14	13,299.09	76,787.51
Engravings	5,633.87	8,855.90	7,512.97	10,267.91	32,270.65
Fancy feathers	6,048.16	4,254.65	35,935.22	41,090.23	87,328.26
Fancy goods, notions, toys	6,877.45	7,267.32	7,789.70	67,522.27	89,457.24
Feather trimmings	9,522.47	676.07	1,686.70	1,384.15	13,269.39
Furniture	1,348.62	1,044.82	73.98	4,148.00	6,615.42
Furs, articles made of	.....	.....	9,013.70	15,411.52	24,425.22
Gas-burners	.....	.....	936.70	728.04	1,664.74
Glass, manufactures of	2,742.07	645.83	5,805.53	6,498.73	15,192.16
Glucose and dextrine	8,492.55	14,596.96	8,888.26	4,885.30	36,863.07
Gutta-percha shields	218.81	660.24	522.38	236.24	1,637.67
Household effects	.....	288.00	1,594.60	81.41	1,914.01
India rubber goods	78.30	.....	1,209.69	2,052.05	3,340.04
Instruments:					
Musical (accordeons), etc	10,778.94	18,521.70	15,381.79	15,692.64	60,375.07
Musical (pianos and pianinos)	8,254.48	7,742.92	4,524.92	8,637.61	29,159.93
Scientific	4,707.49	4,168.90	2,840.02	8,455.54	20,171.95
Ivory piano keys	.....	.....	1,474.17	3,677.86	5,152.03
Jewelry	.....	.....	116.00	.....	116.00
Jute bagging	.....	.....	2,348.30	2,588.98	4,937.28
Lanoline	.....	.....	1,405.96	773.42	2,179.38
Leather gloves and glove leather	69,581.08	86,166.92	55,953.50	108,897.10	320,598.55
Leather, manufactures of	8,904.14	6,681.70	18,776.78	16,432.99	50,795.61
Liquors, malt and distilled	6,101.65	7,554.43	12,667.43	9,258.72	35,583.23
Lithographs	562.38	840.47	42.90	665.90	2,111.65
Machines	.....	.....	907.38	1,323.16	2,230.54
Metal:					
Manufactures	35,564.41	12,189.33	13,673.70	23,426.66	84,854.10
Brass, bronze, and spelter goods	11,873.91	8,379.93	7,763.74	46,685.73	74,903.31
Cuivre poli articles	2,016.26	963.66	1,048.23	2,613.72	6,641.86
Zinc goods	3,088.09	11,152.25	9,489.28	66,742.81	90,372.43
Minerals	107.10	.....	371.40	367.07	845.57
Mother-of-pearl	.....	.....	1,164.68	514.46	1,679.14
Moldings, gilded	499.19	271.56	.....	.....	770.75
Oil paintings	28,437.54	247.12	3,451.00	21,808.18	53,988.84
Oleographs	2,899.36	1,898.76	1,718.85	46,108.81	52,625.78
Paper:					
Fancy	40,705.38	29,809.27	29,396.79	66,724.98	166,636.42
Manufactures of	25,063.55	15,068.30	26,044.16	31,604.97	97,780.98
Photographs	3,372.64	1,641.97	2,384.39	2,754.56	9,533.56
Plants	758.88	.....	.....	.....	758.88
Porcelain ware	1,618.13	775.26	468.63	16,097.26	18,954.28
Rags, waste paper	4,579.50	16,054.09	37,805.89	32,741.53	91,181.01
Ready-made clothing	5,424.37	27,360.24	99,504.43	57,332.79	189,621.83
Cloaks, woolen, etc	65,676.90	141,652.60	130,067.88	442,832.41	780,229.79
Jerseys	9,306.98	195,282.60	52,806.66	30,151.04	287,497.28
Shawls	7,630.44	42,999.47	4,940.95	16,150.80	71,721.66
Rennets	5,369.63	11,929.20	11,280.30	3,146.86	31,725.49
Silver, articles made of	.....	.....	754.62	114.24	868.86
Size for painters	.....	857.14	.....	.....	857.14
Statuaries	.....	32.36	.....	.....	32.36
Sugar, capillary	3,583.44	.....	.....	.....	3,583.44
Sundries	49,643.91	20,095.89	81,744.10	51,551.49	203,035.39
Theater apparatus	286.79	.....	.....	.....	286.79
Trimmings	6,188.17	30,518.26	17,097.80	29,735.37	83,489.71
Wines	822.58	398.69	.....	196.64	1,417.91
Wood, manufactures of	2,985.64	2,770.06	1,633.38	1,792.42	9,181.52
Yarn, woolen and worsted	27,341.33	37,538.09	36,466.35	22,676.78	124,022.55
Total for year ending September 30:					
1886	811,960.50	1,138,952.36	1,523,355.74	2,230,618.60	5,704,882.20
1885	867,307.17	961,859.80	1,051,692.85	1,703,901.14	4,584,760.96
Increase	.....	177,092.56	471,662.89	526,712.46	1,120,121.24
Decrease	55,346.67	.....	.....	.....	.....

EXHIBIT G G.—*Exports to the United States from the district of the United States consulate-general at Berlin and the consulates subordinate thereto, during the year ended September 30, 1887.*

[Values given in United States gold currency.]

Articles.	Annaberg.	Berlin.	Bremen.*	Breslau.	Brunswick.	Chemnitz.	Dresden.	Hamburg.	Leipsic.	Plauen.†	Stettin.	Total.
Albumen and yelks of eggs							$20,072.63	$5,692.32				$25,764.95
Albums		$796,880.60										796,880.60
Alum earth				$9,727.98								9,727.98
Amber goods		2,968.98									$34,173.43	37,142.41
Animals, domestic, wild, birds			$17,740.20		$69,823.47			6,127.48				93,691.15
Apparatus and instruments. (See also Instruments, scientific)			10,966.09									10,966.09
Art, works of		34,574.09										34,574.09
Artificial flowers		3,643.20				$887.88	5,008.71					9,594.74
Baskets and cane ware		11,419.05			8,181.00	4,946.40		199,788.94				224,335.39
Bead goods						41,927.64				$2,707.80		44,635.44
Beet sugar, grape sugar					2,521,704.42			237,673.72			275,709.14	3,035,087.28
Beer						1,224.78						1,224.78
Blankets					14,627.53							14,627.53
Books, music			16,117.11		12,816.47				$77,718.51			106,152.09
Bricks						2,528.61			7,161.31			9,689.92
Bristles, feathers, horse hair		32,002.60						305,905.92	240,087.00		67,663.66	645,659.18
Hair, human, braids			24,304.39					43,134.41				67,438.73
Brushes	$3,208.19					138.64						3,346.83
Books and periodicals		35,664.26					61,862.84	8,680.48	376,552.86		1,132.83	483,893.27
Buttons:												
Vegetable ivory	45,779.96	68,777.69										114,557.65
Glass, metal, wooden		61,598.72			11,604.34	9,907.17	20,614.47			$564.94		104,219.64
Bottles and stoppers		318.60										318.60
Candles		1,066.75										1,066.75
Crude moss			11,784.54									11,784.54
Chemicals, drugs, dyes	4,486.29	284,220.33	138,574.81		357,472.02		44,606.20	317,586.95	16,922.49		6,559.18	1,170,378.22
Dextrine and glucose		131,642.20						7,469.45			18,819.77	157,931.42
China-ware, porcelain, and earthenware		16,362.71	151,597.14	87,631.94	12,665.08	16,265.15	113,212.35	51,668.72	43,522.97			492,941.01
Chromos, picture-books, and pasteboard ware		12,187.88		8,513.02					63,713.36			84,414.26
Cloths					137.95							137.95
Clothes, ready made		130,302.82										130,302.82
Collars, cuffs, cravats, etc		41,345.44										41,345.44
Cloaks, woolen, etc		636,372.89	11,784.54									648,157.43
Jerseys, Jersey cloth		214,880.22				15,042.43						229,872.65
Cotton goods						6,366.10						6,366.10
Coat linings						1,249.50						1,249.50
Colors		40,105.44			5,535.89				33,081.67			78,673.00
Colors, aniline		99,281.19										99,281.19

* Bremen exclusive of re-exported petroleum barrels, whiskey.

† Commercial Agency Plauen established August 17, 1887.

EXHIBIT G G.—*Exports to the United States from the district of the United States consulate-general at Berlin, etc.*—Continued.

[Values given in United States gold currency.]

Articles.	Annaberg.	Berlin.	Bremen.*	Breslau.	Brunswick.	Chemnitz.	Dresden.	Hamburg.	Leipsic.	Plauen.†	Stettin.	Total.
Bone black					$2,211.40							$2,211.40
Chicory and coffee					81,813.55			$217,973.08			$388.50	300,175.13
Crinoline, etc						$32,569.16						32,569.16
Dental material					1,719.45							1,719.45
Dress and piece goods						1,671,466.88				$74,947.58		1,746,414.46
Astrachans		$210,595.70										210,595.70
Cotton and cotton-mixed goods		35,433.32						30,711.45				66,144.77
Linen and linen-mixed goods		18,480.83		$647,626.82	2,378.16	35,935.02	$445,051.30	62,184.10				1,211,656.23
Silk and silk-mixed goods		12,120.20		209,431.55				11,844.96				233,396.71
Velvets, velveteens, and plush goods		485,732.23			6,692.55							492,424.78
Woolen and woolen-mixed goods		483,224.43		72,525.95	4,369.37	1,891.62	190,080.92	135,055.62	1,250,769.56			2,137,867.47
Dress steels						196.60						196.60
Dry goods, yarn			$77,018.02									77,018.02
Ebony								5,380.05				5,380.05
Embroideries, etc	$23,071.78	68,733.08				621,621.99						713,426.85
Embroidered goods						5,046.27						5,046.27
Engravings		13,078.68										13,078.68
Essential oils, chemicals									134,571.34			134,571.34
Fancy feathers for trimming		137,400.61										137,400.61
Fancy goods, notions, toys		97,243.40			16,785.03		52,699.12	76,445.75				243,173.30
Flannels						114,744.29						114,744.29
Fruits, dried, preserves								168,633.63				168,633.63
Fruit juice									13,148.59		20,525.74	33,674.33
Furniture		5,286.88									550.82	5,837.70
Furs and skins		24,896.89							485,627.46			510,524.35
Gas-burners	720.97											720.97
Glass, manufactures of		11,058.09										11,058.09
Glassware and cathedral glass				33,764.15	865.49		337,529.33					372,158.97
Gloves:												
Cotton, silk, wool, and kid	269,339.50					1,609,833.28			49,806.34			1,928,979.12
Leather and glove leather		346,290.68		55,013.68	210,512.43			206,434.33	371,373.12			1,189,624.24
Glove knives						387.52						387.52
Glue, gelatine, gold size					15,399.30	1,275.41					6,080.36	22,755.07
Grain, plants, and seeds					1,594.60			193,456.45	33,907.17		46,705.06	275,563.28
Hemp goods					2,613.45						98,812.00	101,425.45
Hides and skins		153,532.41			28,197.24			302,367.36				569,097.01
Hops					27,057.37						980.65	28,038.02
Hosiery						5,163,791.49						5,163,791.49
Household effects		14,453.92			109.85							14,563.77
Jewelry, silver ornaments, etc		693.84						75,292.39				75,986.23
India-rubber goods		11,903.54			68,838.76			338,712.93				419,455.23
Instruments, musical. (See also Labels printed on paper)	834,291.02						22,806.31	15,635.66	207,953.18	66,666.96		1,146,853.13
Accordions		94,054.21										94,054.21
Pianos and pianinos		20,424.58										20,424.58

Instruments, scientific. (See also Apparatus and instruments)		31,733.32			8,202.07							39,935.39
Isinglass					11,650.35							11,650.35
Ivory and ivory goods		2,916.00						103,010.32				105,926.32
Jute goods		17,212.03										17,212.03
Knit goods						168.52						168.52
Labels printed on paper					9,123.72							9,123.72
Knitting needles						101.95						101.95
Laces, embroideries, and embroidered articles										21,177.27		21,177.27
Lace trimmings, etc	47,727.39						6,337.55		110,664.77			164,729.71
Lace-curtains										2,969.62		2,969.62
Lanoline		3,396.20										3,396.20
Lap-robes						3,158.90						3,158.90
Lead											4,894.56	4,894.56
Leather			7,300.42	256,774.42		119.00		10,236.41				274,430.25
Leather, manufactures of		61,689.96										61,689.96
Liquors:												
Malt and distilled		25,446.09			72,668.88			186,440.96			280.61	284,856.54
Color, fruit juice, etc				19,540.34								19,540.34
Lithographs		4,082.02										4,082.02
Marly, buckram, etc										9,677.57		9,677.57
Manuring salt, kainit					658,451.73			401,836.58				1,060,288.31
Machinery		9,017.86			182,992.85	15,704.45			60,077.75			217,792.91
Machine felt						3,907.70						3,907.70
Metals: (See also Zinc and spelter)			40,416.43					56,774.82				97,191.25
Brass, bronze, and spelter goods		82,019.94										82,019.94
Cuivre poli articles		752.41										752.41
Manufactures of		64,078.43										64,078.43
Scrap iron, old rails, etc		25,728.35			13,335.43						137,334.47	176,398.25
Minerals		1,359.39										1,359.39
Miscellaneous	14,008.36	124,746.14	28,670.88	25,132.52	13,448.28	13,086.15	40,552.97	20,827.72	92,008.96		20,572.84	388,049.77
Mother-of-pearl		9,221.20										9,221.20
Mufflers, shawls		88,416.38				98,668.83				4,630.35		191,715.56
Musical goods. (See also Instruments, musical)					46,517.05	124,969.91						171,486.96
Oil paintings		29,752.82					5,117.26					34,870.08
Oleographs		16,274.76										16,274.76
Orseille liquid						15,090.79						15,090.79
Paper hangings					12,018.88							12,018.88
Paper:												
Boxes	7,588.55											7,588.55
Fancy		139,388.11					53,408.40					192,746.51
Manufactures of		134,764.30						172,050.79				306,815.09
Stucco						3,096.91						3,096.91
Percussion caps and explosives					2,350.04							2,350.04
Portland cement				3,138.66	130,560.76			463,874.14			113,536.85	711,110.41
Potato flour											7,076.24	7,076.24
Potatoes											962.34	962.34
Pins						379.17						379.17
Photographs and photographic paper		5,663.14					324,092.01					329,755.15

* Bremen exclusive of re-exported petroleum barrels, whiskey.

† Commercial agency Plauen established August 17, 1897.

EXHIBIT G G.—*Exports to the United States from the district of the United States consulate-general at Berlin, etc.*—Continued.

[Values given in United States gold currency.]

Articles.	Annaberg.	Berlin.	Bremen.*	Breslau.	Brunswick.	Chemnitz.	Dresden.	Hamburg.	Leipsic.	Plauen.†	Stettin.	Total.
Photographic lenses					$11,367.04							$11,367.04
Provisions, canned meat, fish, etc			$115,253.65		18,427.13			$17,072.69				150,753.47
Herrings								171,644.85			$4,276.00	165,920.85
Pipes					6,627.80							6,627.80
Rags, waste paper		$156,705.78	14,124.35		109,346.50		$14,946.99	712,591.67			412,227.77	1,479,943.06
Rape oil											27,749.06	27,749.06
Rennets, guts, bladders		16,603.11						42,084.43				58,687.54
Rice and rice flour			539,170.91									539,170.91
Sauerbrunnen					5,504.94							5,504.94
Rushing, frilling, etc										$392.31		392.31
Salt								615.61				615.61
Shell goods						$10,977.94				961.00		11,939.80
Silk hat material, silk buttons, etc		6,753.25										6,753.25
Straw hats, plaits, etc							1, 72.79					1,672.79
Sugar				$108,512.49								108,512.49
Surgical instruments										95.53		95.53
Tin foil				2,115.50								2,115.50
Tobacco and cigars			364,107.15				4,841.82	8,193.60				377,142.57
Toys	$36,443.61			12,378.47		51,123.48						99,945.56
Trimmings	1,540,945.78	147,488.01				3,132.23						1,691,561.02
Upholstery goods						329,153.01						329,153.01
Underwear						58,284.50						58,284.50
Wash blue						6,424.23						6,424.23
Watch movements							1,067.20					1,067.20
White sugar of lead					327.25							327.25
Wines‡		498.39	117,072.88			271.61						117,842.88
Willow, straw, and wooden ware			66,000.12									66,000.12
Wood articles and manufactures of wood		15,215.84				1,554.28		25,328.23				42,098.35
Wood pulp and cellulose				9,731.74	2,076.53						73,444.47	85,252.74
Wool waste						2,602.53						2,602.53
Yarns:												
Woolen dyed		73,262.71			3,364.60	58,760.39			$221,470.88			356,858.58
Cotton						23,967.73						23,967.73
Zinc and spelter. (See also Metals)		45,260.50		175,569.77				23,894.47			67,609.21	312,333.95
Zinc oxide											11,922.64	11,922.64
Woolen table covers, curtains, carpets						237.07			108,594.01	4,058.21		112,889.29
Total for the year ending September 30—												
1887	2,826,895.43	6,240,145.54	1,735,218.97	1,732,129.00	4,808,607.45	10,211,604.32	1,765,026.17	5,520,250.44	3,998,528.30	188,850.00	1,460,228.20	40,487,473.82
1886	2,118,330.32	5,704,882.20	2,574,857.79	1,530,287.75	5,970,113.44	9,846,432.08	1,456,210.31	8,037,561.31	4,118,266.62	.. ....	1,707,308.66	43,054,300.42
Increase in 1887	708,563.91	535,263.34		201,891.25		365,172.29	308,815.86			188,850.00		
Decrease in 1887			839,638.82		1,161,505.99			2,507,310.87	119,738.32		247,080.46	2,566,726.60

* Bremen exclusive of re-exported petroleum barrels, whisky. † Commercial agency Plauen established August 17, 1887. ‡ Bremen includes also beer, liquors, etc.

Total amount of exports for same period from the whole of Germany amounts to $83,794,630.83, against $76,588,045.76 in preceding year. France exported in the same time to the United States: In 1886, $63,652,499; 1887, $69,887,367.

Contrasting statistical returns of a more distant period, the growing importance of Germany over France appears evident in this instance. The following was exported to the United States:

From—	1877.	1887.
Germany	$27,971,512.29	$83,994,630
France	49,183,691.47	69,887,367

As will appear from Exhibit E E, our four principal export commodities—breadstuffs, provisions (chiefly lard and bacon), raw cotton, and mineral oils—continue to a large extent to be among German imports. To breadstuffs and some provisions—lard, butter, etc.—I have already alluded under "Agriculture," and as to cotton under the head "Textile Industry."

With regard to breadstuffs and provisions great changes are observable in the European markets. As repeatedly stated by me (see, for instance, annual report of last year), East Indian wheat enters into close competition with our wheat, and so do Australian supplies of meat with our animal products.

As to mineral oils, especially petroleum, for which Europe, until a few years ago, was exclusively dependent upon the United States, Russia now, with her abundance in petroleum, appears in the European market as a powerful rival to our oil. Germany's consumption of this product grows, of course, with her increasing population. While her consumption in 1867, for instance, amounted only to 60,526 tons, or 2.31 kilograms per capita, it consumed in 1886, 438,200 tons, or 9.13 kilograms per capita. Its market price in Germany per 100 kilograms, inclusive of barrel, was as follows, according to official returns: White refined petroleum sold—

At Bremen:	
1881	$3.8
1886	3.0
1887 (September)	3.6
At Stettin:	
1881	4.1
1886	5.3
1887 (September)	5.0

The consumption of the essentially better, though dearer, kinds of petroleum—for instance, the so-called "water-white"—has considerably increased in Berlin.

As to the consumption of Caucasian petroleum it is very difficult to state with desirable accuracy the imported amounts, not only with regard to this, but, as above stated, also to all other articles of German commerce, as long as among foreign countries the German free ports, Bremen and Hamburg, continue to appear in German official statistics. The latter give, for 1886, as countries through and from which petroleum is imported—

	100 kilograms.
Bremen	1,068,853
Hamburg	798,477
Belgium	347,633

	100 kilograms.
Netherlands	254,001
Russ a	134,156
United States	1,732,646
Others	47,285
Seaward	883
Not ascertained	16
Total	4,383,949

From information received from the German-Russian Naphtha Importing Company, the Berlin Board of Trade states the following:

The said company erected towards the end of 1885, on the territory of the ancient East Railroad terminus a basin for storing and retailing petroleum, and disposed in 1886 of about 750,000 kilograms, against 194,000 kilograms in 1885.

The oil arrived here in so-called cistern-cars, at first from the large reservoirs of Illowo, near the German-Russian frontier; since September, 1886, however, from the Lübeck basins of the company, to which petroleum is transported from Libau in tank-steamers.

It is stated that the quality of the Caucasian petroleum finds increasing favor with Berlin consumers on account of its white color, and for having a high flashing-point (about 30° centigrade). In public bids for Prussian railroads and other authorities the company succeeded in obtaining large orders. Prices followed the fluctuations of American petroleum, but remained always by 50 to 100 pfennigs per 100 kilograms below the quotations of the "bourse" for standard white.

In spite of great efforts which Russia makes to drive American petroleum from the German markets, a Berlin paper says "American petroleum exporters possess a solid support in Germany's commercial relations with the United States, to which, in exchange, are furnished textile fabrics, iron articles, chemicals, paper goods, etc.; but what should we exchange in our trade with Russia for her petroleum, which, by all conceivable tricks, tends to exclude our own goods from her markets?"

GERMAN STEAM-SHIP COMPANIES.

North German Lloyd.—From their annual report, published for 1886, the following figures are taken. Dividend paid per share, 7 per cent:

	Marks.	Marks.
Surplus revenues amounted to		8,248,807.10
Deductions therefrom:		
Interest on loans	100,000.00	
General business expenses	490,337.45	
Subsidies to imperial steam-ship lines	64,241.30	
Income tax	131,298.35	
Leaving a total of		6,691,412.69

Of this amount the following sums have been credited to the following ledger accounts:

Loan negotiating account	3,131,000
Steamers of the imperial lines, for second half year	323,000
Dock at Bremerhaven	100,073
Pier at Hoboken	40,000
A minor account	23,042
Total	3,748,783
Leaving a net proceed of	2,942,629
Which, with 616 marks from 1885, gives a net profit for 1886 of	2,943,245

Distributed as follows:	
5 per cent. dividend	1,500,000
5 per cent. "tantieme"	72,181
Insurance fund	162,716
2 per cent. super-dividend	600,000
Brought forward for new account	4,199

The report states that passenger traffic was only moderate, and outward trade to New York somewhat decreased. Altogether, 94 voyages to New York and back were made. The two steamers *Trave* and *Saale*, acquired from the Glasgow Fairfield Ship-building Company, enabled the North German Lloyd to introduce a bi-weekly fast service between Bremen and New York. To Baltimore 28 vogages have been made, with satisfactory results.

Like other companies, the North German Lloyd suffered in its South American trade from competition and quarantine measures, and the 37 voyages to Brazil and the La Plata States have not met expectations. Prospects of an improved La Plata trade are considered as hopeful. The imperial mail service to East Asia and Australia was opened last year, 1886, by the *S. S. Oder**. The results of this traffic have, according to this report, not been disappointing. The passenger traffic was rather poor, but all vessels took out and brought in full cargoes. The six vessels of the new lines have all been delivered by the Vulkan, Stettin. The three smaller ones, *Stettin, Lübeck, and Danzig*, are employed in the Mediterranean trade, while the three larger, *Preussen, Bayern, and Sachsen*, are placed in the mail service.

A large new tender is now building to replace the *Nordsee*, which is being turned into a coal-lighter.

The East Asiatic line forwarded from Bremen in all during the half year 811 passengers and 7,176 cubic meters goods; to Bremen, 274 passengers; the Australian line from Bremen, 1,759 passengers and 9,896 cubic meters of goods to Australia, and from Australia, 648 passengers. The three last steamers built by the Vulkan are as much alike as possible. The *Sachsen*, for instance, is 410 feet long, 45 feet wide, 33½ feet deep; has a capacity of 4,576 registered tons, gross weight. She is furnished with four decks, the promenade deck being free from all machinery, skylights, etc., fitted with rests, tables, etc., and protected by double awnings. The engines are of the treble expansive type and indicate 4,200 horse-power. The coal consumption when under full steam amounts to 59 tons daily.

The *Preussen* has attained a speed of 14.50 knots; the *Bavaria*, 14.78, and the *Sachsen*, 15 knots. Loading and unloading gear, machinery, and other equipments are all of the most approved system, having electric light throughout, in addition to hundreds of incandescent lights for the saloons. Two-arc lamps are used when passing the Suez Canal. Their construction is entirely of steel; compartments water-tight. Outfit is sumptuous.

Subsidized steamers.—The new Reichstag will have to consider a petition from the North German Lloyd Company, asking that the vessels of their Mediterranean fleet may in future end their voyage at Port Saïd instead of Alexandria. The advantages of this change are stated to be as follows: By the vessels going straight to Port Saïd, passengers will be saved the trouble and expense of journeying with their luggage by rail to Suez, there to be transported by light vessels to Port Tewfik to meet the Indian and Australian steamers.

*Foundered in 1887, the wreck causing the North German Lloyd a loss of about 1,600,000 marks.

The North German Lloyd has also in view the extension of the same line through the Suez Canal to Aden, Zanzibar, and even to Cape Delgado or Durban, and eventually to Cape Town. Instead of Trieste, the steamers of the East Asiatic and Australian lines are to call at Genoa. In consequence of the quarantine regulations applying to steamers coming from Trieste to Italian ports (Brindisi for instance), it was impossible to arrange the Mediterranean line according to article 2 of the contract of the North German Lloyd with the German Government. This contract was amended and a connection between Brindisi and Port Saïd established for the present, by avoiding both Trieste and Alexandria, Brindisi and Port Saïd exacting no quarantine, on condition that the steamers do not touch land in the Suez Canal.

Under these circumstances it became advisable for the company's steamers of the main line to call for passengers and cargoes at some Mediterranean port and thence to proceed direct to Port Saïd. Now Genoa possesses all these conditions required. It is easily reached from all directions—by land by the Mont Cenis, Gotthard, and Brenner Railroads.

The Hamburg American Packet Company started in 1886 a new enterprise, by the opening of the Stettin-New York Line. For 1884 and 1885 this company paid no dividend; in 1886 shareholders received 4 per cent. The failure of a Stettin firm offered the opportunity for a New York line from that port. A ruinous competition lasting many years had been removed by a favorable amalgamation with the firms of Edmund Carr and R. M. Slowman & Co., constituting the Union Steamship Company. Two old steamers, the *Westphalia* and *Silesia*, were sold and two new steamers purchased.

The returns, a report says, of the West Indian-Mexican Line show diminished receipts to the extent of 200,000 marks in 1885 against 1884; receipts in 1886 are stated to be fairly favorable. The passenger traffic on the New York line has for some years experienced a slight decrease, attributed to the falling off in emigration. The goods traffic produced better returns. The number of passengers carried by the main line in 1886 was 43,612 against 54,166 in 1885; by the Stettin-New York Line, 1,603, by the West Indian-Mexican Line, 2,916 against 2,767. The goods traffic was, respectively, 339,145 against 304,240 cubic meters (23,913 tons), and 121,482 against 118,200 tons. The reports put the total gains from the transatlantic voyages at 1,758,577 marks against 900,896 marks in 1885. In 1885 the West Indian-Mexican Line brought a profit of 1,027,401 marks; the New York Line a loss of 127,505 marks. The total returns in 1886 excel those of 1885 827,681 marks, but those of 1884 by very little.

As to the question of speedy vessels the report published is silent. It is only asserted that the depth of water in the Elbe about Hamburg is not sufficient to warrant the construction of vessels of greater speed.

A reorganization of the "Continental Conference" has been effected. The following transatlantic lines belong to this "Conference:" The North German Lloyd, the Hamburg-American Packet Company, the French Company, the Red Star, the Carr Union, the Thingvalla, the Dutch-American, and the Italian lines. The "Conference" decided to increase the steerage rates by 25 per cent. In consequence of this the North German Lloyd will charge $25 between Bremen via Southampton, London, and the Scandinavian

ports, and $20 from the latter points to the United States. The French line has decided upon a fixed charge of $25; the Hamburg-American Packet Company, $24; the Dutch-American Company, $21; the Thingvalla, $27. The fares of the Carr Union are $16 from Hamburg and $18 from Scandinavian ports and $22 from New York.

The Hamburg-South American Steamship Company has established steamship connections between Hamburg and the South American ports, west side of Brazil, Uruguay, and the Argentine Republic. Sixty-five trips to and fro resulted in a net profit of 1,481,740 marks. This sum was placed to the credit of the following accounts:

	Marks.
Steamers	1,051,685
Reserve fund	25,000
Tantième account	25,860
Balance	4,915

Surplus, 1,106,740 marks, which, as a dividend of 10 per cent. with 75 marks per share, was distributed. The capital stock amounts to 5,000 shares, each 750 marks; in all, to 3,275,000 marks. The sixteen steamers in 1886 were booked with 5,740,000 marks. In the course of 1886 three new fast-sailing steamers were added, *Bahia*, *Tijuca*, and *Campinas*, valued at 2,421,685 marks. Two additional new steamers are being built.

As to passengers and goods traffic no figures have been published. The company has to sustain a great competition with the Kosmos, another company which, with thirteen steamers at a value of 3,510,000 marks, maintains traffic between Hamburg and the west coast of South America. Kosmos was enabled to pay in 1886 a dividend of 11⅓ per cent. (40 marks) per share. As to the extent of trade between South American states and Germany I refer to Exhibits Y, Z, A A, D D.

The importance of the relations with South American states is shown also by the establishment of a German bank in Rio de Janeiro. The managers of the Berlin Disconto-Gesellschaft, and the Norddeutsche Bank, Hamburg, agreed to establish in common this bank in Brazil. The capital stock is to amount to 10,000,000 marks.

Die Deutsche Dampfschiffahrts-Rhederei, Hamburg, has for the past fifteen years carried on steam shipping with East Asia and China chiefly by freight steamers, eleven in number, worth 3,815,400 marks. Net proceeds for 1886, 324,823 marks; dividends, 4 per cent. on 3,000 shares, each 3,000 marks (3,000,000), capital stock. Every twenty days a steamer leaves Two new steamers were in course of construction.

Goods shipped from Hamburg to East India, China, and Japan.

Years.	Tons.	Years.	Tons.
1880	15,801	1884	26,521
1881	20,362	1885	35,775
1882	23,146	1886	42,896
1883	28,785		

Goods from these countries entered at Hamburg.

Years.	Tons.	Years.	Tons.
1880	14,305	1884	21,195
1881	17,373	1885	30,695
1882	19,010	1886	35,789
1883	20,625		

A German-Chinese bank.

A syndicate has been formed lately for establishing a German bank in China. The question of the amount of capital stock has not yet been settled, but it is believed that the course followed in the Argentine Republic and Brazil will also be adopted. First-class banking firms are interested in the case, S. Bleichroeder, M. A. von Rothschild & Sons, Disconto Bank. Similar banks are to be established in Japan and Australia.

EXHIBIT N N.—*Report on the average condition of the German banks of issue during the year* 1887.

Name of the bank.	Liabilities.			
	Stock capital.	Reserve fund.	Notes in circulation.	Total liabilities.
Imperial Bank	$38,560,000	$5,443,536	$217,023,394	$285,752,980
Municipal Bank of Breslau	714,000	142,800	690,914	2,878,134
Private Bank of Magdeburg	714,000	143,514	654,500	2,046,394
Private Bank of Dantzic	714,000	778,500	653,310	2,813,636
Province of Posen Bank	714,000	178,500	435,064	1,532,482
Bank of Hanover	2,856,000	285,600	1,180,004	6,427,904
Bank of Frankfort	4,080,034	954,142	2,040,850	9,264,150
Bavarian Bank of Issue	1,785,000	893,696	15,635,172	19,897,088
Saxon Bank of Dresden	7,140,000	961,282	10,680,488	22,213,492
Clearing-House Bank of Leipzic	714,000	57,120	674,730	1,950,896
City Bank of Chemnitz	121,380	80,256	120,498	1,015,546
Wurtemberg Bank of Issue	2,142,000	188,516	5,194,350	9,668,352
Bank of Baden	2,142,000	365,092	3,261,076	6,032,894
Bank of South Germany	3,739,986	422,450	3,617,888	7,968,006
Bank of Brunswick	2,499,000	108,290	617,610	4,410,854
Bank of Bremen	3,952,466	218,946	1,158,110	7,976,332
Total	62,577,816	9,911,510	263,632,838	429,858,940
Uncovered notes			53,144,544	

Name of the bank.	Assets.			
	Specie on hand.	Treasury notes on hand.	Notes of other banks on hand.	Bills of exchange.
Imperial Bank	$178,619,476	$5,161,080	$2,586,346	$118,184,374
Municipal Bank of Breslau	275,128	2,142	114,240	1,484,882
Private Bank of Magdeburg	254,998	952	120,904	1,318,758
Private Bank of Dantzic	225,148		127,350	869,414
Province of Posen Bank	148,512	238	1,904	952,714
Bank of Hanover	423,640	19,992	34,748	4,174,996
Bank of Frankfort	742,084	8,092	180,166	6,421,240
Bavarian Bank of Issue	7,678,118	26,418	613,326	10,652,166
Saxon Bank of Dresden	4,208,792	126,378	2,344,586	13,423,436
Clearing-House Bank of Leipzic	251,804	4,998	167,314	1,068,394
City Bank of Chemnitz	46,886	2,142	9,520	729,470
Wurtemberg Bank of Issue	1,961,350	12,852	836,808	4,408,712
Bank of Baden	1,104,092	1,666	2,420	4,276,384
Bank of South Germany	1,238,314	9,044	169,694	4,710,972
Bank of Brunswick	158,270	5,950	13,090	1,996,292
Bank of Bremen	394,128	6,426	9,996	6,484,310
Total	197,750,630	5,388,320	7,351,344	181,195,616

EXHIBIT N N.—*Report on the average condition of the German banks, etc.*—Cont'd.

Name of the bank.	Assets—Continued.			
	Collaterals.	Stock and bonds.	Other assets.	Total assets.
Imperial Bank	$12,307,218	$2,378,810	$87,110,088	$227,948,292
Municipal Bank of Breslau	701,396	304,640	49,504	2,931,922
Private Bank of Magdeburg	212,772	182,566	42,602	2,088,452
Private Bank of Dantzic	1,129,756	91,868	467,908	2,911,454
Province of Posen Bank	356,286	.....	110,432	1,570,086
Bank of Hanover	159,698	114,240	1,500,590	6,427,904
Bank of Frankfort	379,372	1,085,280	677,586	2,493,820
Bavarian Bank of Issue	494,326	21,420	411,264	19,897,088
Saxon Bank of Dresden	983,982	114,478	1,111,986	22,213,492
Clearing-House Bank of Leipzic	242,284	23,086	223,006	1,950,880
City Bank of Chemnitz	75,208	48,076	104,244	1,015,546
Wurtemberg Bank of Issue	175,882	114,478	158,270	7,688,352
Bank of Baden	205,870	13,090	410,312	6,032,824
Bank of South Germany	209,916	1,063,396	586,670	7,958,006
Bank of Brunswick	413,644	.....	1,703,366	4,429,180
Bank of Bremen	698,580	331,584	202,002	8,136,986
Total	18,646,110	5,946,430	16,470,790	432,679,240

Clearing-house transactions amounted to—

	Marks.
1885	12,554,444,300
1886	13,356,686,500

MELBOURNE EXHIBITION, 1888.

The German Empire participates officially in this exhibition. With exception of cost of building, furnishing and superintending the German department, and the payment of salaries to the commissioner and his assistants, the expenses will not be borne by the Empire.

German sample warehouses (suggested also to American manufacturers) have, it is stated, contributed considerably to the rapid development of German trade during recent times. In one instance (as was lately the case with an exhibition of Argentine commodities at the Produce Exchange, Berlin, October 27, 1887), raw material and chief articles of this Republic consumed abroad were exhibited to the German manufacturers and merchants, and it is noticeable that sample warerooms of German goods are even found on board the steamers.

The goods so exhibited embrace mainly articles suitable to the customs and tastes of the foreign natives concerned, and are thus introduced among them.*

* The German Government has thus far declined to participate officially in the Paris international exhibition of 1889.

Maritime insurance business of Hamburg during the years 1814 *to* 1886.

Years.	Sums insured.	Average premium.
	Marks.	*Per cent.*
1814-'15	96,877,500	3.53
1816-'20	219,302,100	2.21
1821-'25	165,597,900	2.36
1826-'30	220,711,410	1.77
1831-'35	290,206,200	1.56
1836-'40	352,953,090	1.51
1841-'45	420,522,750	1.44
1846-'50	452,551,560	1.67
1851-'55	636,188,460	1.54
1856-'60	944,115,270	1.40
1861-'65	985,436,330	1.34
1866-'70	1,131,051,915	1.21
1871-'75	1,814,008,171	1.02
1876-'80	2,193,802,540	1.03
1881-'85	1,806,305,760	1.12
1886	1,726,351,000	.94

COMMERCIAL TREATIES.

The much-discussed project of a customs union between Germany and Austria has as yet not been realized. In the mean time the treaty of May 23, 1881, between those two countries, which was to expire at the end of 1887, has by agreement been prolongated to the 30th of June, 1888, providing that if neither of the contracting parties gives notice to the contrary by the 15th day of February, 1888, then the treaty shall from the latter date remain in force, with one year's notice if to be terminated.

As to the change of treaty between Germany and Roumania, I refer to report No. 279, from this office, dated August 12, 1887.

Greece was negotiating with Austria and France about the most favored nation clause. According to the treaty of 1884 with Germany, Greece decided not to interfere with the tariff upon iron and iron goods. This agreement has been carried out, but the duties on other articles not mentioned in the treaty have been questioned.

The signing of a treaty, containing the most favored nation clause (as the Berlin National Zeitung reported), between Germany and the South American Republic of Paraguay, deserves attention.

On the 1st of January, 1888, the new Italian tariff went into effect. The existing commercial treaty between Germany and Italy remains in force up to the 1st of February, 1892, no notice to the contrary having been given to either side (see report No. 278, from this office, dated August 12, 1887). It the mean time Italy's treaties with Austria and France expired at the end of 1887, and as Italy is not disposed to renew the same upon the former basis, aggravation is indirectly imminent to German trade. Between Austria and Italy a new treaty has been agreed upon, containing a series of tariff reductions as compared with the duty rates of the existing autonomous tariffs. In comparing same with the rates of the previous commercial treaty between Austria and Italy, it appears that a much smaller number of articles on both sides is embraced in the treaty, and that the majority of the rates thus established have experienced an enhancement as against those heretofore in force. But a worse evil is menacing from another direction. The treaty between France and Italy, which contains a great many rates, both of the Italian and the French customs tariff, has thus far not been

renewed. If the present conventional tariffs are not renewed, the far higher rates of the general tariffs, in spite of the most favored nation clause included in treaties, will find application in both countries against all others. Hence the effect of difficulties, chiefly caused by Italy's tendency to imitate to a great extent the protective system of other countries, would be numerous enhancements in the Austrian, French, and Italian tariffs, which more or less must affect also Germany's export.

GERMAN NAVY.

That with the increasing significance of Germany's over-sea trade protection may not be wanting, the naval force is again to be augmented.

According to the proposals of the new budget, the corps of officers of the German navy is to consist of 2 vice-admirals, 5 contre-admirals, 30 sea-captains, 56 corvette-captains, 57 lieutenant-captains, second class; 184 lieutenants, and 143 sub-lieutenants. The list of active naval officers has been increased by 53 since 1884. The list of officers on leave has increased from 79 to 127. At the present moment the full strength of the officers in the navy is 947.

The machine engineering force consists of 2 staff engineers, 4 chief engineers, 15 engineers, and 27 assistant engineers.

The importance of the North and Baltic Sea Canal (see last annual report), not only in a commercial respect, but also in case of war, is evident.

It is expected that by April 1, 1888, the negotiations for territorial acquirements, etc., will have been concluded. It is supposed that the work of dredging will require seven years. The board of managers is to be augmented by the addition of new specialists, names thus far not known. The board is called "Kaiserliche Canal Commission," chief office at Kiel. Subordinate to this commission will be 5 inspectors. 25 architects, 10 chief masons, 10 surveyors, 15 overseers, 7 assistant overseers, and a number of draughtsmen. In the office of works will be 1 chief clerk, 25 assistants, and 15 messengers. To preserve proper discipline among the operatives, 4 barrack inspectors and 40 "barrack fathers" are to be appointed. It is proposed to appropriate 16,000,000 marks (about $4,000,000) for the first fiscal year. Of this sum Prussia contributed 5,200,000 marks; the remaining 10,800,000 will be covered by an imperial loan.

The plan for the erection of barracks, to serve as dwellings for the workmen, will receive the final approval of authorities after they have been subjected to a careful examination by the imperial sanitary committee. Much care is to be bestowed upon the treatment of the laborers. The plan of the work, which is to commence at the west mouth of the canal, has at last been officially published. The canal will flow into the Elbe at an angle of 450 or rather at 200 meters distance from the Elbe into an inner harbor, which latter will be 500 meters long and 100 meters wide. Two fine sluices, 20 meters long and 25 meters wide, will connect the inner harbor with the fore harbor. The latter, which is to have a length of 400 meters and a width of 100 meters, will be protected by powerful moles of over 200 meters in length, built into the Elbe in the form of a curve. In order to obtain the necessary space for the harbors, sluices, etc., about 1,870,000 cubic meters of earth must be excavated. The bed of the canal at the mouth

is 9.50 meters wide and inclines towards the sluices and the river. The two powerful sluices are to be provided each with two pairs of ebb and flow gates, which, when closed, will secure complete isolation even against the most violent storm flood. At ebb-tide the sluice-gates will, as a rule, be kept open from the moment that the water-level on both sides is the same, until the approach of the flood-tide.*

MILITARY ORGANIZATION AND SCHOOL EDUCATION.

The peculiar political situation of Europe has made Germany gradually a power depending upon military organization for the protection of its integrity. It is quite natural that the constant increase of the military force, necessitated by the armaments of neighbors, has its influence upon trade and industry, and many measures, heretofore and more lately passed, are of a character not only intended to protect agricultural and other interests, but also to provide for additional means to increase the national revenues. It is noteworthy that by a new act, now before the Reichstag, the adoption of which is beyond doubt, the military equipment will be so augmented as to produce an available force of 3,000,000 men and even more. The "Landsturm" is to embrace all men not belonging to troops either of the line or "Landwehr" (first and second call), from their seventeenth to the forty-fifth year of age. The "first call" embraces all men from their twentieth to the thirty-ninth; the second, from their fortieth to the forty-fifth year.

The standing army, the actual school for military service, will consist, as heretofore, of 450,000 men, and will, in time of war, be increased by enrolling at once all men up to their thirty-ninth year of age, besides the "Landsturm."

In case of emergency, even men able to bear arms who have passed their forty-fifth year of life will be available for home garrison duty. It is estimated that "Germany under arms" may show a military force not far from 7,000,000 men, of whom one-half can be ordered directly to the field, the rest to remain at home for garrison duty. It is said that as a result of the new organization Germany will have an active military force exceeding that of France, which has to draw its army from a population by 10,000,000 smaller than that of Germany, and that the latter may operate with two armies, if attacked simultaneously by two powers. It is stated that Germany requires only one-sixth of the national revenues to meet military expenses, while France appropriates one-third of its entire revenue for this purpose.

Owing to the circumstance that school education is obligatory (as well as military service for all male persons fit for service), the German soldier is of a superior character. Of 169,240 men, the number of recruits enrolled in 1886–'87, 163,203 could read and write German, 4,822 another language (French, Polish, Danish, etc.), and only 1,215 men could not read or write their own name. The percentage since 1884 is as follows:

	Per cent.
1886–'87	0.72
1885–'86	1.08
1884–'85	1.21
1883–'84	1.27

* The last information from Kiel is to the effect that the erection of buildings for 2,000 laborers is to commence at once; 4 buildings for administrative purposes; 7 barracks, each for 100 men; 2 barracks, each for 50 men; 5 separate barracks, each for 80 (79) men; dining-halls, kitchens, and overseer houses, etc., are resolved upon.

The only question remaining open is to what an extent trade and commerce may be affected hereafter, and what new measures may be required to meet all emergencies. It is to be observed that the economical question receives much attention in Germany, and that the new military organization, not very materially increasing the so-called standing army, is apparently not looked upon by the majority of the people as improper and purposeless.

Revenues and expenditures of the German Empire are shown in Exhibits I I and K K, and the amount of duties on goods imported collected during the years 1885–'86, in Exhibit L L.

For special statements as to revenues from tobacco, beer, and ardent spirits, referring to Exhibits F, H, K, L, and M, I further inclose Exhibit M M, as to revenues from playing cards.

EXHIBIT I I—*Estimates of the revenues of the German Empire for the fiscal year ending March* 31, 1887.

Customs and taxes collected within the Zollverein:	
Revenue in which share all federal states:	
Custom duties	$58,468,270
Tobacco tax	1,949,458
Beet-sugar tax	8,429,960
Salt tax	9,176,090
Whisky tax and transit tax on whisky	9,088,744
Brewing tax and transit tax on beer	4,247,348
Amounts paid by parts of the federal territory not included in the German Zollverein instead of duties and taxes there not collected:	
Duties, taxes on tobacco, beets, and salt	1,607,119
Whisky tax	282,645
Brewing tax	118,740
	93,313,374
Imperial stamp taxes:	
On play cards	247,520
On bills of exchange	1,525,580
On bonds, stocks, etc., bills and lottery tickets	4,684,792
On statistical fee	131,376
	6,589,268
Surplus receipts of post-office and telegraph department	6,990,084
Surplus receipts of Government printing office	256,612
Amount of earnings from railways of the Empire	8,978,791
From the Imperial bank	501,823
Sundries	2,006,150
From the invalid fund of the Empire	6,389,372
Interest from invested funds of the Empire	285,600
From deficiency appropriations	54,554,979
Total amount of the quota paid by the several states of the Empire	44,491,077
Total revenues	219,352,130
Total expenditures	215,251,530
Excess of revenue	4,100,600

EXHIBIT K K.—*Estimates of the expenditures of the German Empire for the fiscal year ending March* 31, 1887.

Imperial diet	$91,225
Imperial chancellor and chancery office	382,658

Foreign office:	
Foreign office	$325,322
Legations, consulates	1,393,895
General fund	126,949
	1,846,166
Imperial office of the interior:	
Office of the interior	160,150
General funds	1,247,215
Imperial commissioners	12,281
Federal office for homestead matters	7,069
Maintenance of discipline in the civil service	1,425
Authorities for examining sea accidents	8,996
Statistical office	155,343
Maintenance of standard measures and weights	24,133
Board of health	33,582
Patent office	173,169
Board of insurance	57,358
Physical technical institution	17,850
	1,898,574
War department	86,703,733
Navy department:	
Admiralty	143,538
Hydrographic office	37,818
German coast-survey office	53,669
Local equipment office	45,125
Jurisdiction	6,616
Religious service	10,877
Military employés	1,841,858
Repairs of vessels	1,383,018
Provisions	763,861
Clothing	22,634
Garrisons	196,088
Additional allowances for boarding	156,128
Surgery and medicines	136,207
Traveling, marching, etc	102,340
Instruction	29,888
Wharves	3,449,762
Ordnance	492,779
Torpedo	164,315
Pilotage, tonnage, light-houses	47,529
Contingent expenses	40,341
	9,124,491
Judiciary	457,912
Treasury department	36,510,247
Railroad department	71,091
Department for debts of Empire	4,919,341
Auditing and comptrolling tribunal	126,092
General pension fund	5,794.062
Invalid fund of the Empire	6,389,372
Total of ordinary expenditures	153,965,959
Extraordinary expenditures	61,285,571
Grand total of expenditures	215,251,530

EXHIBIT L L.—*Comparative statement showing the amount of duties on goods imported into the German Zollverein, collected during the years* 1885 *and* 1886.

Articles.	Value.		Percentages of the total amount of duties collected.	
	1885.	1886.	1885.	1886.
Coffee and coffee sub titutes (except chicory)	$11,334,445	$11,877,357	19.70	20.11
Tobacco, manufactures of tobacco	8,243,225	8 4 9 229	14.33	14.34
Grains and other agricultural products	7,267,857	7,483,906	12.63	12.67
Rye	3,1·4,391	3,318,669	5.47	5.62
Wheat	1,561,307	1,2 9,785	2.71	2.15
Barley	1,0.0,051	1,268,992	1.90	2.15
Indian corn	3.7,64‹	409,362	.58	.69
Oats	595,512	291,955	1.09	.50
Petroleum and other mineral oils, n. o. p. f.	7,331,330	6,8 2,284	12.83	11.57
Wine, etc	3,470,958	3,478,6:8	6.03	5.89
Wood and other carving materials, and manufactures of	1,55°,2 9	1,094,041	1.38	1.88
Cattle	1,082,927	1,526,580	1.88	2.59
Cotton yarn and wads	1,171,345	1,253,9.3	2.04	2.12
Lard and grease	848,319	998,361	1.47	1.69
Brandies	796,485	891.795	1.38	1.51
Iron and iron ware	1,033,531	8:3,345	1.80	1.·5
Herrings, salted	740,904	806,350	1.27	1.37
Silk and silk goods	862,922	791,464	1.50	1.34
Spices	737,319	707,931	1.38	1.20
Rice	6·9,464	674,357	1.16	1.14
Salt	692,936	694,211	1.20	1.·6
Flax-seed oil, rape-seed oil, etc	536,391	557,206	.93	.94
Woolen goods	551,193	554,534	.96	.94
South fruit, dried	528,872	539,130	.93	.91
Combed wool, wads, and yarn of wool	547,89	489,669	.95	.83
Cotton goods	509,827	457,882	.89	.78
Leather and leather goods	429,574	416,759	.75	.71
Tea	395,199	384,465	.69	.65
Fruit, seed, berries, etc., dried, baked, etc	351,802	384,:45	.61	.65
Mill-ground articles and bakers' ware	327,689	361,903	.57	.61
Linen yarn and thread	369,911	330,922	.64	.56
Sugar, sirup, and molasses	342,542	310,0 8	.60	.53
Cocoa	275,772	307,478	.48	.52
Fancy goods	254,578	306,798	.44	.52
Machines, engines, etc	341,125	277,498	.59	.47
Drugs, medicines, dye-stuffs	297,719	262,164	.5?	.44
Meat, poultry, game, etc	2.1,251	257,101	.37	.44
Cheeses	217,565	246,644	.38	.42
Butter; also artificial	193,494	230,565	.33	.39
Eggs	198,710	228,806	.·5	.39
Glass and glass-ware	190,718	212,705	.33	.36
Clothes, linen under-clothing, trimmings	197,817	211,422	.34	.36
Oranges, lemons, etc	169,749	176.021	.30	.30
Linen and linen goods	205,3·1	166,406	.36	.28
Beer	128,756	152,847	.22	.26
Caviare and substitutes	93,046	133,411	.16	.23
Preserved articles of consumption	135,919	125,497	.24	.21
Paper and pasteboard	114,362	117,549	.20	.20
Manufactures of clay	79,939	114,027	.14	.19
Oysters and shellfish, etc	81,055	106,889	.14	.18
Manufactures of copper, and other not precious metals, n. o. p. f	103,635	99,615	.18	.17
Stones and stone-ware	122,335	96,063	.21	.16
Codfish, dried	84,803	94,529	.15	.16
Cocoa mass, chocolate, etc	79,939	89,152	.13	.15
Blubber and train oil	81,460	85,457	.14	.14
Starch, etc	73,301	75,159	.13	.13
Manufactures of straw and bast	63,051	72,706	.12	.12
Soap, perfumery	67,206	66,394	.12	.11
Table oils	56,166	65,424	.10	.11
Lees, yeast	51,676	64,701	.09	.11
Confectionery	66,081	63,300	.12	.11
Hops	67,487	58,377	.12	.10
Palm and cocoa-nut oil	58,387	52,725	.10	.09
Honey	47,752	46,843	.·8	.0‹
Tallow and animal fats	39,653	46,727	.07	.08
Caoutchouc and gutta-percha, etc	43,288	46,554	.08	.08
Oil-cloth, etc	48,453	43,162	.08	.07
Hair, and manufactures of	27,846	30,526	.05	.05
Wax	32,406	27,546	.06	.05
Stearine, palmitine, etc	45,220	26,773	.08	.05
Pianos and other musical instruments	23,262	24,097	.04	.04
Railroad cars	13,299	20,663	.02	.04
Candles	10,451	18,477	.02	.03
Brushmaker's ware	10,1.6	10,187	.02	.02

EXHIBIT L L.—*Comparative statement showing the amount of duties on goods imported into the German Zollverein, etc.*—Continued.

Articles.	Value.		Percentages of the total amount of duties collected.	
	1885.	1886.	1885.	1886.
Furs	$6,235	$6,738	.01	.01
Zinc and zinc ware	7,268	6,529	.01	.01
Ropemaker's ware	13,217	6,554	.02	.01
Lead and lead articles	3,149	5,298	.01	.01
Vinegar	3,677	4,888	.01	.1
Tin and tin articles	3,894	3,127	.01	.01
Asbestos paper and asbestos articles	2,114	2,069	.....	.....
Play-cards	226	243	.....	.....
Beverage, artificially prepared	274	160	.....	.....
Starch sugar and starch sirup	560	71	.....	.....
Wrecked articles	79	26	.....	.....

EXHIBIT M M.—*Stamp-tax levied on playing-cards in the German Empire (fiscal years* 1881-'82—1885-'86).

Fiscal year.	No. card factories.	Cards sold.		Subject to tax.		Exported.	
		Sets of less than 37 cards.	Sets of more than 36 cards.	Sets of less than 37 cards.	Sets of more than 36 cards.	Sets of less than 37 cards.	Sets of more than 36 cards.
1	2	3	4	5	6	7	8
1881-'82	61	3,289,300	942,500	3,110,000	238,200	179,300	704,300
1882-'83	60	3,204,300	1,058,800	3,106,000	233,400	158,300	825,400
1883-'84	61	3,346,000	1,236,100	3,151,000	208,700	195,000	1,027,400
1884-'85	61	3,529,000	1,278,400	3,323,100	203,500	236,900	1,074,900
1885-'86	61	3,588,500	1,261,300	3,383,800	205,800	199,700	1,055,500

Fiscal year.	Imports.		Total sets subjected to tax (exclusive of columns 5 and 9 and 6 and 10).		Tax collected.	
	Sets of less than 37 cards.	Sets of more than 36 cards.	Sets of less than 37 cards.	Sets of more than 36 cards.	Total.	Per capita.
1	9	10	11	12	13	14
						Cents.
1881-'82	16,000	6,100	3,126,000	244,300	$252,200	5
1882-'83	15,800	7,100	3,121,800	240,500	251,500	5
1883-'84	22,000	7,000	3,178,000	215,700	252,200	5
1884-'85	16,000	8,900	3,308,100	212,400	261,300	5
1885-'86	16,400	3,900	3,405,200	209,700	267,900	5

PUBLIC DEBT.

The indebtedness of the German Empire amounted at the end of the German fiscal year ending March 31, 1887, to 440,023,400 marks, bonds bearing interest; to 137,527,800 marks, treasury notes of the Empire, bearing no interest, and to 65,000,000 marks, treasury checks, likewise bearing no interest. Total indebtedness, 642,551,200 marks= ($152,927,185).

New loan.—On the 5th of July, 1887, a Government loan was opened for subscription. This loan of 100,000,000, chiefly for military purposes, with only 3½ per cent. interest, was subscribed seven times over. This circumstance is partly ascribed to the fact that German people have abandoned the idea to invest their savings in Russian paper at 4½ per cent., as has been done to a great extent heretofore. Undoubtedly the semi-official argument that Russian paper was by no means a secure investment had much to do with inducing the people to invest in home paper, although yielding smaller interest.*

BI-METALLISM.

Bi-metallists in Germany have thus far not met with much success before the Reichstag, though in February, 1886, a resolution was passed requiring of the Government "renewed study of the currency question." Competent circles incline to the belief that Germany having introduced the gold standard with great sacrifices will adhere to the latter.

GERMAN RAILROADS.

Length of lines of all German railroads was as follows in the year named:

	1883-'84.	1884-'85.	1885-'86.
	Kilometers.	*Kilometers.*	*Kilometers.*
Main lines	34,861.6	35,619.5	36,164.7
Standard-gauged side tracks	1,136.6	1,221.2	1,417.3
Small-gauge tracks	107.3	107.3	147.3
Toothed-wheel lines	1.5	3.5	7.5
Total	36,127.0	36,953.5	37,736.8

At the close of fiscal years ending March 31, 1886 (no later data being published):

Capital stock, 9,742,606,000 marks, or 2,594,000 marks per kilometer.

Revenues from passenger traffic, 274,384,000 marks, or 29 per cent. from total railroad revenues; from goods traffic, 670,525,000 marks, or 71 per cent.

Working expenses, 574,795,000 marks, or 15,300 marks per 1 kilometer of existing lines.

Surplus revenues, 423,898,000 marks, or per kilometer of existing lines, 11,600 marks, or per kilometer of operated lines, 1,630 marks.

Rolling stock, 12,532 locomotives, 22,873 passenger cars, 253,933 cars for goods.

COLOR-BLINDNESS OF GERMAN RAILROAD OFFICIALS.

The application of optical signals constitutes in railroading one of the most important means for the safety of working railroads. A repeated examination of railroad officials as to any existing color-blindness is therefore of great consequence. On the 1st of July, 1886, 146,233 such examinations of officials, especially in the external service, took place. Up to the 1st of July, 1886, 239,726 persons, and 0.81 1 per cent. were found to be color-blind (1,934 officials and workmen). In previous examinations nearly the same percentage of color-blind persons was officially ascertained. Such persons, as long as they are

* The demand for good American paper is also constantly increasing.

retained in service, are no longer admitted to any function bearing upon signal or external service.

PAPER RAILROAD CAR-WHEELS PARTLY OBJECTIONABLE.

The German Advertiser of Architectural Administration (Central-Blatt der Bauverwaltung) published a few days ago the following article:

For some time car-wheels, being disks of pulp or paper stuff, have been in use on American railroads. These disks consist of single layers of strong paper, which, by means of rice-paste, are one by one pasted upon each other under strong water-power pressure until the required strength has been obtained. Owing to the greater elasticity and minor ductility of pulp, as compared with iron, in case of changes of temperature, an increased working safety, especially a slighter tear and wear of the tires, and a quiet, noiseless run of the cars was anticipated from the introduction of paper-disk wheels in railroading. This presupposition induced, since the year 1881, some railroad administrations of Germany to make trials with paper wheels. Such wheels, with a few exceptions, were applied only to passenger and sleeping cars, mostly to fast-running trains; partly brakes were acting upon them. At first the favorable observations made in America seemed to be confirmed, as neither fractures of tires nor other accidents were reported, the causes of which might have been found in the use of paper wheels.

In December, 1886, the railroad office received report of a passenger car having jumped the track, apparently caused by this kind of wheels. An examination showed that the paper disks of all four wheels were entirely parted and that both the tires—which otherwise had remained intact—and the axles, with the metal nave or boss fixed to them, had been flung aside. As, according to the appearance of the fracture of the paper disks, an alteration in the layers or texture of the material was to be presupposed, all paper-disk wheels were subjected to a close examination; on which occasion several injuries in the material, particularly out-breakings at the external circumference of the paper disks were discovered to an extent of 330^{mm} in length, and to 99^{mm} in depth. These injuries were chiefly found on wheels which were exposed to the action of a brake.

Because of dangers, possible for the working of railroads according to such observations, any existing paper-disk wheels shall in future, as we learn, no longer be used either under brakes or in fast-running trains. Also the supply of such new wheels shall be discontinued until considerable improvements in the method of manufacture shall have removed every doubt of its durability.

GERMANY'S POST AND TELEGRAPH DEPARTMENT FOR 1885–'86.

(No later returns published.)

Post-offices, 17,452; revenues, 152,904,000 marks; letters received, 1,149,895,000; parcels received, 88,612,000.

Letters and parcels, 12,655,000 pieces; value declared, 18,411,172,000 marks.

Mail matters, money paid on delivery, 9,390 pieces; value collected, 70,405,000 marks.

Number of letters for collection of money on bills, and for acceptance of drafts, 4,685,559, representing in value 436,486 marks.

Postal orders received, 60,682,000; value, 3,598,382,000 marks; postal orders sent, 60,032,000; value, 3,577,489,000 marks.

Stage-coach passengers, 3,412,558; telegraph offices, 13,118. Telegraph net works: Length of lines, 82,992 kilometers; length of wires, 296,909 kilometers. Telegrams: Received, 15,844,163; sent, 15,555,531; fees, 21,424,710 marks.

Life insurance in Germany.

Close of year—	Generally.	Per 100,000 inhabitants.	Close of year—	Generally.	Per 100,000 inhabitants.
1830	2,072	7	1860	95,406	252
1835	9,274	29	1865	210,227	530
1840	19,852	60	1870	362,250	867
1845	28,463	82	1875	523,842	1,076
1850	36,955	104	1880	608,648	1,245
1855	54,333	149	1885	727,534	1,553

CONCLUSION.

In closing my report for 1887, I beg leave to say that I have endeavored to give as careful a review of trade affairs in Germany and the various circumstances which influence more or less its industrial activity as I was able to compile from such material as lay within the scope of my observations. Political and social events have an important bearing upon trade and industry and lead to conclusions, instructive to the different branches of trade and industry as well as to the student of national economy and progress. It must be admitted that since the re-establishment of the German Empire improvement is observable in all directions. Notwithstanding many reverses and disappointments the Germans have not only exerted themselves to retain what once has been gained, but to add to it from their own and whatever other resources that could be brought within their reach. Diligence and administrative as well as domestic economy are characteristics of the German people.* The comparative inactivity of former days has given way to a spirit of enterprise, encouraged as much by growing national pride and self-conscientiousness as by the irrepressible tendencies towards material advancement.

The German looks for relief from internal dissensions to prudent statesmanship; anticipates a satisfactory solution of social problems from extension of trade and industry, and relies upon legislative measures to ameliorate the condition of the laboring classes and to restrain at the same time corporative and capitalistic encroachments. To accomplish all this Germany desires peace, and accordingly endeavors to tranquilize all disturbing influences.

The military reorganization, increasing the force immediately available to more than three millions of men and causing at once an additional expenditure of 280,000,000 marks, and perhaps more, is viewed here as a "peace measure," and, if, as such, effective, the money and sacrifices required would be inconsiderable as compared with the advantages obtained.

It is not within my province to enlarge upon this subject. I desire merely to assist in reaching conclusions which may be arrived at concerning the different matters contained in my report.

Rumors of a disquieting character, too frequently exaggerated for speculative purposes, occasion constant fluctuations of values and loss of confidence in commercial and industrial circles. A paper before me says:

> Means to set the industrial machine in full motion are not wanting; our central money institutions find it difficult to employ profitably their funds. Everything is prepared to let the reins go; the financial world, speculation, trade, and industry all are listening with anxiety for the tidings of relief. Even the extremest pessimist will acknowledge that the political situation has perceptibly improved. Still, the "bourse" acts with reserve, no signs of change in its movements, in every direction indifference, weariness, irresolution, and nervousness. Financiers have no confidence in the following of the public; speculation, frequently deceived and partly dispirited by losses, has become apathetic. A singular phenomenon—assurance of peace, constantly contradicted by adverse statements; money in abundance, and a total stagnation of business. Contemplate the enormous amounts of money in the great banks of Europe. The Bank of England was lately com-

*The Prussian minister of finance, v. Scholz, explained in a statement made a few days ago to the "Landtag," that the increased revenues of the state resulted chiefly from the economical management of the Prussian railroad system. Though the receipts of the last year were 4,890,000 marks less than estimated, expenses were reduced by 17,300,000 marks. I have alluded to this subject in another part of my report.

pelled to reduce its rate of exchange to 3 per cent., and the cash in the vaults reached, January 12, 1888, £20,400,000, £1,000,000 more than at the corresponding time of the preceding year, while the entire reserve exceeds by £1,500,000 that of 1887, when the rate was 5 per cent. for private discount. The private deposits are at present £2,000,000 over and above the status of 1887. The Deutsche Reichsbank, Germany's greatest bank institution, has 800,000,000 marks in specie on hand, counterbalancing paper money in circulation equal to 80 per cent. * * * It can not be denied that this anomalous state of things is chiefly attributable to constant rumors of probable war, to feverish preparation to be ready for all emergencies, and to relentless agitation of political questions, irritating finances, trade, and industry. Careful observers incline, however, to the belief that, at least for some time, war will be averted.

Another paper says:

We have always contended that we must prepare ourselves as much as possible and accept as permanent the present situation of Europe. While we do not consider war as probable, provided no unforeseen circumstances transpire (as the Emperor in his opening address to the Prussian House of Representatives emphasizes), we can not entertain hopes for a speedy clearing up of affairs or a general tranquilization. Neither Russian nor French policy encourages such hopes, although the guaranties of peace are more certain to-day than they have been for some time, and the interests of peace grow in strength and influence every year. Under these circumstances the world acts wisely in following quietly its vocations and in minding as little as possible the consequential faces of political augurs, who one moment wear a bright and at another a gloomy mask.

The increased exports from Germany to the United States have given much satisfaction here, though merchants and manufacturers express apprehensions that the time is not far distant when a change in the economic policy of the United States, such as has been foreshadowed in the last message of the President, will reduce considerably exports to our country.

The export relations between Germany and other European countries are much disordered. Exports from Germany to Russia have been reduced to a minimum in consequence of the nearly prohibitive character of the duties imposed by the Russian Government, while trade conventions with other countries apparently rest upon a rather insecure basis.

The Germans, however, are quick in recognizing actual and possible changes and have not lost time in going to work to find and open new markets. This is proven by the establishment of several new steam-ship lines, particularly to the Mediterranean, to Asia, Africa, etc., which are subsidized by the Imperial Government. Colonial enterprises are encouraged and placed under direct protection of the Empire. A school for instruction in oriental languages and customs is now in successful operation. China and Japan are considered profitable fields for the development of German enterprise. Already considerable shipments go to these countries, while Central and South American trade also receives much attention. The aptitude with which young Germans acquire a knowledge of foreign languages secures advantages which German trade and industry will not be slow in turning to practical account.

The opinions regarding the late measures of the Reichstag imposing additional internal-revenue taxes and increasing the duties upon certain articles of import are conflicting. The opposition seeks to show that the internal-revenue taxes will not meet anticipations, while the augmented import duties will neither benefit the Government to the extent expected nor bring the desired relief to the agricultural classes who chiefly advocated the new measures. On the other hand, the friends of the new tax and duty system contend that more favorable results may be hoped for in the future. More-

over, the new tax and duty impositions were necessitated as much by the wants of the Government and the needs of agricultural and other interests as by the increasing competition of foreign nations. Russia having excluded German manufacturers almost entirely from her markets, and other countries contemplating similar steps, all more or less fortifying their argument in favor of higher duties by pointing to the United States as showing that protection means prosperity and full purses for the Government as well as to the people. I abstain from commenting upon this argument.

The new German tariff act was approved July 15, 1879, and its amendments received Imperial approval May 25, 1885, and December 21, 1887, respectively. As to the results of the original act and its first amendment I have reported heretofore. Accepting the opinions of friends and opponents with reserve, it is notwithstanding admitted that the amendment of December 21 has thus far not justified the anticipations of those who chiefly advocated its passage. Cereals have up to date not experienced any noteworthy advance in price. The fact is but too apparent that the quotations of grain are, after all, subject to the ruling of the world's leading market, which adapts itself quickly to any changes and has the support of circumstances beyond the control of national or local legislation. And in more than one respect experience teaches us that the powerful means and appliances of trade and speculation are constantly employed to overleap custom barriers. Overpopulation and overproduction, capitalistic combinations, and low wages are factors which are felt in every direction of national and international trade and policy.

Generally speaking, the last year (1887) has closed under about the same conditions and auspices as its predecessor; successes and disappointments have alternated. But German patience and thrift are neither exhausted nor apparently discouraged. It must be conceded that in the great struggle for national existence and integrity, amidst war rumors and business depressions, "hope for good success" animates all who regard the interests of the German Empire, its political and social future, and its trade and industry as identical with their own.

F. RAINE,
U. S. Consul-General.

CONSULATE-GENERAL OF THE UNITED STATES,
Berlin, January 30, 1888.

THE GRAIN TRADE AND CROPS OF 1887.

SUPPLEMENTARY REPORT OF CONSUL-GENERAL RAINE.

1. THE GRAIN TRADE.

Supplementary to my last annual report, the following carefully compiled synopsis of a review of the grain trade, just issued under the auspices of the Berlin Exchange, will be read with interest:

The grain trade of 1887 has not left behind it pleasant impressions. Hope for a betterment of prices was not realized and all ventures based upon favorable anticipations met with total failure. Capitalistic influence prevented from time to time the pressure of large visible supplies upon the market; but all calculations proved erroneous, and towards the middle of the year the lowest prices known for years controlled the world's market. In the mean time, however, the supply from old

crops, particularly wheat, has become more normal and we may now direct our attention to future crops and their influence upon prices hereafter. The most unpleasant feature of the last year resulted from the political tariff enactments. The protective system can record new and great success. France, Italy, and Germany are endeavoring to increase largely their import duties to guard against the competition of foreign grain and to check the price, controlling influence of the world's market at the expense of the consumers and for the benefit of a small number of land owners who produce a supply beyond their own needs. Germany takes the lead and has increased since 1879, for the third time, her import duties. A comparison shows that Germany of all the great powers is ahead in demanding the heaviest sacrifices from the people. The duty per 100 kilograms is now as follows:

Countries.	Wheat.	Rye.	Barley.	Oats.
	Marks.	*Marks.*	*Marks.*	*Marks.*
Austria-Hungary	3.00	3.00	1.50	1.50
France	4.05	1.21	1.21	2.43
Italy	2.43	2.43	.98	1.62
Spain	3.50	2.50	2.50	2.50
Germany	5.00	5.00	2.25	4.00

In anticipation of the increase of the tariff large quantities of grain, especially rye, were imported into Germany.

Attention has been called heretofore to the efforts of rescinding the proof of identity in case of export. This question has become of greater importance since the passage of the new increase of duty, and should be acted upon by the Reichstag. Agriculture as well as trade are equally interested.

The threefold increase of duty has made the export of German grain entirely impossible, and steps are required to bring relief.

Naturally grain prices in Germany, on account of the exorbitant increase of duties, are considerably higher than in other countries which have no duties of this kind. While the duty screw applied in 1885 reduced export to small quantities, the export is now totally cut off. The consumption of the domestic product is restricted to home requirements. The eastern provinces, which formerly shipped their surplus to northern neighboring countries, are compelled to hawk their grain over expensive railroad lines in the south and west of Germany, where the people are accustomed to other qualities, and where the product of North Germany with the high railroad tolls added does not realize such prices as would be paid by foreign countries. At the same time the competition of the northern with the southern and western producer prevents an improvement in prices.

This matter has caused much agitation, and the opinion is now pretty generally entertained that the revocation of the proof of identity is a positive necessity, and the only question open is, how this can be done without causing the least injury to all parties interested—agriculture, trade, milling, and fiscal necessities.

All of the considerations are overweighed by the desire that transferable legal bills should be issued without proof of identity for the grain or the person of the shipper being demanded, so that for grain exported over any boundary of the Empire a corresponding quantity can be imported. Since Germany is compelled to import a considerable quantity of grain for home consumption, and the export stands in proportion of 1 to 9 to the import, the fiscal requirements would not be affected. The quantity withdrawn from home consumption would be replaced by foreign grain. Thus the farmers as well as the merchants of the northeastern provinces would be enabled to seek their chances in the world's markets, free of restrictions, and the south and west could buy their grain wherever they could procure it most acceptable to themselves.

A disagreement in opinion prevails whether the transferable legal bills shall be issued at the time of import or export. On first sight this appears to be immaterial, but closer consideration shows a powerful difference. It is clear that the bills issued at the time of export, and which are accepted at the time of import in payment for a corresponding amount of duty by the authorities, would become a regular article of trade, the maximum value of which would be limited by the very amount of duty to be paid, while the real value would be subject to momentary offerings or demand. As a matter of course importers who want bills would only buy them if they could gain a profit by using them in the payment of duty, and this profit would often cause a lively demand for such bills, comparatively raising the value of the latter,

In view of the great capitalistic value which the bills represent, the exporting holder of them would dispose of them as soon as possible, and after harvest, when our grain, earlier in the market than the Russian product, will find ready purchasers, a great many of such bills may be thrown upon the market, causing depreciation. This could incite to forced imports, which, under the circumstances, would cause a depression of grain prices. If the time draws near when the validity of the bills, which are to be good for six months, expires and the arrival of the import grain is delayed, by reason of disasters on the ocean, low water, interrupted canal transportation, or other circumstances, then the money invested in the bills is lost, or the holders compelled to get rid of them at any price. The fact that by large offers of bills, not yet used, unexpectedly heavy imports would flood the markets and injure trade, would, by no means, revert to the benefit of the value of grain.

It will be preferable, therefore, to issue the bills at the time of import. All disadvantages, the fluctuations of the export bills, forced imports, the necessity of investing largely in export bills, etc., would be evaded. It is obvious that the pecuniary value of import receipts, on which correspondingly depends the balance of the present German grain intercourse, would not be great, since, as stated before, nine times as many will be used as are issued. The importer will gladly dispose of them for a smaller amount, and, consequently, no material loss will follow. This would prevent the effect which the fluctuations of the bills would create, the stimulus for forced importations would be removed, commerce could return to its old ways, and protective duties would at least be sufficiently harmless so as not to destroy trade and intercourse. It is said that the Government does not intend to retain the entire duty, but to retain a certain portion. This would make the entire measure purposeless, because the export profit involves but a few marks per wispel, and so soon as this profit is withdrawn the incitement for export will cease. Wheat and barley would be chiefly benefited if the proof of identity were removed. Germany produces of these two articles large quantities, for which high prices are paid in foreign markets, while the latter can sell to us cheaper quantities, which are much inferior, but in demand by our millers. Barley, particularly from the valley of the Saales, is in great favor in England, and Germany could advantageously exchange England's barley for our own. This would also benefit the price of barley.

2. The Crops of 1887.

The writer devotes the next part of his communication to the influence of the fall and winter weather upon the crops, and is of the opinion that Germany's hope for a good harvest will be realized. Alluding to last year's crop, the writer says:

Prussia.—Rye and wheat suffered somewhat from inclement weather, but Prussia notwithstanding produced last year over average crops; wheat, 12 per cent.; rye, 3 per cent. Barley yield only 92 per cent. of an average. Oats in 1887 yielded only 95 per cent. of an average crop, while the yield for 1886 was 13 per cent. above average. Pease fell behind also; yield only two-thirds of an average crop. Oil-seeds barely held their own. The dry summer affected the potato crop.

The result in Prussia:

Class.	Yield, in 100 kilograms.		
	1887.	1886.	Average yield.
Wheat	17,354,606	15,732,053	15,457,609
Rye	56,535,601	54,870,645	54,654,594
Barley	13,512,338	13,731,365	13,755,905
Oats	32,507,221	48,043,761	34,398,255
Pease	3,671,419	3,251,895	3,687,562
Colza and rape seed	1,003,952	924,601	1,060,002
Potatoes	205,064,218	217,370,195	200,743,123

Percentage of crop yield in the several provinces of Prussia.

Provinces.	Winter wheat.		Winter rye.		Summer barley.		Oats.		Pease.		Colza and rape seed.		Potatoes.	
	1887.	1886.	1887.	1886.	1887.	1886.	1887.	1886.	1887.	1886.	1887.	1886.	1887.	1886.
East Prussia	119	104	109	102	104	113	103	120	096	121	093	086	108	100
West Prussia	116	109	098	100	096	097	110	110	108	087	105	112	084	109
Brandenburg	111	102	108	110	094	101	092	106	091	066	099	075	091	095
Pomerania	116	105	093	096	098	095	101	100	096	074	110	097	095	103
Posen	104	091	097	089	096	092	103	107	117	065	086	084	078	105
Silesia	109	093	102	089	107	108	103	120	100	084	095	087	096	104
Saxony	110	110	101	106	099	103	100	121	100	090	097	088	112	102
Schleswig Holstein	122	111	111	108	100	104	089	106	100	109	112	104	122	117
Hanover	123	121	111	111	096	104	093	116	091	104	099	098	122	112
Westphalia	112	100	109	098	087	104	085	115	084	093	089	091	134	105
Hesse-Nassau	105	101	105	088	088	097	098	112	089	092	088	079	121	091
Rhineland	110	101	111	092	075	094	073	110	064	089	089	088	091	103
Hohenzollern	094	092	092	089	090	110	088	145	056	073	073	089	067	073
Kingdom of Prussia	113	103	103	099	09½	101	095	113	100	087	100	090	098	103

In the Grand Duchy of Mecklenburg rye and oats suffered, though an average quantity was harvested; wheat 112 to 115, rye 98, oats 90, and potatoes 98 per cent.

In the Kingdom of Saxony, wheat 105, rye 95 to 100, barley 90, oats 80 to 90 per cent. of an average crop. In Saxony 923,900 hectares of its entire area (1,499,298 hectares) were devoted to agriculture. Twenty-eight per cent. of the country is under forests. This shows that nine-tenths of Saxony is devoted to agriculture and forestry.

Altenberg had less than an average crop, but of good quality.

Bavaria had a wheat crop of 115 per cent.; rye hardly reached 100, barley 105 to 110, oats less than 75 per cent.

Wurtemberg had an average crop, although summer grain fell to 85 per cent.

Austria-Hungary, particularly Hungary, had an excellent crop. The report shows the following yields in Hungarian metric centners, the comparisons being made with 1882, that being a most successful year:

Year.	Wheat.	Rye.	Barley.	Oats.
1887	41,883,537	15,588,245	12,940,460	9,870,937
1886	28,879,851	11,079,562	8,494,577	8,663,815
1882	37,144,047	15,537,860	12,982,911	9,238,394

The percentage yield in Austria and Hungary was as follows:

Cereal.	Hungary.		Austria.	
	1886.	1887.	1886.	1887.
Wheat	87	126	92¼	116
Rye	82	106	98	104
Barley	64	116	106	106
Oats	87	109	107¼	92¼

Roumania and Servia show good results, and more than average returns.

Russia's crop is stated as follows, in chetverts:

[One chetvert = 5.77 imperial bushels.]

Cereal.	1885.	1886.	1887.
Rye	118,000,000	111,000,000	127,000,000
Winter wheat	13,000,000	6,600,000	14,200,000
Summer wheat	16,800,000	20,400,000	23,400,000
Oats	65,200,000	95,000,000	95,000,000
Barley	16,800,000	22,400,000	21,000,000

Norway and Sweden and Denmark and Belgium report full crops, beyond average yields.

France shows, according to official returns, that 7,082,360 hectares were under wheat, while unofficial statements give only 6,853,000 hectares. According to the official statistics the wheat production of France was as follows:

Year.	Under cultivation.	Yield.
	Hectares.	*Hectoliters.*
1887	7,082,360	109,747,645
1886	6,960,107	107,287,082
1885	6,956,765	149 861,562
1884	7,052,221	114,290,717
1883	6,808,821	108,783 426

Unofficial statements give the yield for 1887 as 117,732,910 hectoliters, being 7,985,265 more than the official returns. The average yield was 15.30 to 17.32 hectoliters per hectare.

Of rye France produced as follows:

Year.	Under cultivation.	Yield.
	Hectares.	*Hectoliters.*
1887	1,057,730	23,793,071
1886	1,634,289	22,610,273
1885	1,672,951	24,074,328
1884	1,735,522	26,255,925
1883	1,719,666	24,142,608

Switzerland had more than an average crop.

Italy was less favored, producing only 42,000,000 hectoliters, while 58,000,000 were required.

Spain had less than a medium crop and must import heavily.

The crop of England and Ireland is computed as follows:

Acres under cultivation.

Cereal.	1871-'75.	1885.	1886.	1887.
England:				
Wheat	3,737,140	2,553,093	2,357,804	2,387,518
Barley	2,548,713	2,447,109	2,432,749	.....
Oats	4,283,277	4,283,594	4,418,959	.....
Rye	67,609	59,303	66,599	.....
Ireland:				
Wheat	.....	71,01"	69,546	60,222
Oats	.....	1,328,869	1,321,983	1,315,702
Barley	.....	179,153	181,598	162,160

In England foreign competition has caused a heavy reduction of wheat. Barley and oats show better results. Clover and grass culture has increased by 3,000,000 acres. Green crops have fallen off 300,000 acres.

It was at first feared that the crops of England and Ireland would be much inferior to those of former years, but it is shown that 32 to 34 bushels of wheat per acre were harvested, while the yield in 1886 was only 27. In 1885 the yield was 35 bushels to the acre. About 9,000,000 to 9,500,000 quarters were realized, leaving about 10,000,000 to 17,000,000 quarters to be covered by imports to meet the requirements. Barley shows an improvement in quality and about 70 per cent. of an average crop. Large imports of oats are needed.

Of the United States the review gives the following statistics:

Cereal.	Acres under cultivation.		Yield in bushels.	
	1887.	1886.	1887.	1886.
Summer wheat	13,009,750	12,273,781	155,752,000	154,842,000
Winter wheat	23,870,135	24,532,174	270,627,000	302,876,000
Total	36,879,885	36,805,955	426,379,000	457,718,000

The review says that in October last, supported by additional inquiries, the wheat crop of the United States for 1887 was calculated at 450,000,000 bushels, thus showing that the crop was largely understated in previous calculations.

Other statements in connection with our corn and other products are copied from the statistics of the Department of Agriculture.

The review alludes particularly to the potato crop, and emphasizes that while in 1883 and in 1886 208,000,000 and 163,000,000 bushels, respectively, were produced, only 184,000,000 bushels were produced in 1887. The review points to the fact that heavy importations of potatoes from England and Ireland and also from Germany into the United States took place, and that this import would have been much larger if it were not interfered with by the heavy duties. A bushel of potatoes is subject to 15 cents duty in the United States. In Germany the centner of 50 kilos is subject to a duty of 1.27 marks. This makes the duty nearly equal in both countries. In October, 1887, 4,000 marks' worth of potatoes and 30,000 marks' worth of potato flour were exported from Stettin to the United States.

Canada was disappointed in its anticipations and will be compelled to purchase heavily in the United States.

That portion of the review which relates to the East Indies is interesting.

Provinces.	Under cultivation.		Yield.	
	1887.	1886.	1887.	1886.
	Acres.	*Acres.*	*Tons.**	*Tons.**
Punjab	8,943,400	6,970,600	1,361,915	1,895,000
Northwest provinces and Oudh	4,902,942	5,240,351	1,732,050	1,847,400
Central provinces	4,297,949	3,902,707	860,000	859,753
Bombay and Baroda	2,360,454	2,969,539	500,000	801,400
Berar	933,933	850,000	133,419	115,512
Bengal	1,009,335	808,515	400,000	336,920
Rajpoonto	1,562,309	1,550,000	397,000	336,000
Central India	3,500,000	3,500,000	500,000	500,000
Hyderabad	1,156,229	1,144,000	69,565	114,000
Mysore	8,928	20,000	1,244	2,056
Cashmere	500,000	550,000	133,333	133,335
Total	26,735,487	27,505,742	6,988,526	6,871,376

* Of 2,240 pounds.

F. RAINE,
Consul-General.

UNITED STATES CONSULATE GENERAL,
Berlin, February 15, 1888.

COMMERCE AND INDUSTRY OF GERMANY.

ANNUAL REPORT OF CONSUL-GENERAL MUELLER.

GENERAL REMARKS.

The year 1887 commenced in Germany with fears of war and ended with the lack of confidence in peace. Uncertainty of what the next hour might bring ruled the day, and kept the public mind in suspense and in a constant state of anxiety.

Legitimate business, conservative by nature, and depending for its activity upon peaceful conditions of society, could not escape being disagreeably affected by the insecure state of affairs.

Thus it occurred that the anticipations of a brisk and profitable trade, indicated by the promising signs of the last quarter of 1886, were not realized in 1887.

Still it is safe to say that German trade, in spite of the retarding influences with which it had to contend, held its own during the year, and compares favorably with the trade of the preceding twelve months, although no great advance or large profits were made.

Aside from the unsettled state of feeling caused by apprehensions of war, trade had no abnormal or accidental impediments of a serious nature to encounter, and was left untrammeled in the display and full development of all its resources and in the utilization of the powerful advantages which ready capital, cheap money, and low wages afford to all industries. If, nevertheless, the balance-sheets of industrial concerns at the close of the year are not found to be so satisfactory as desired, the causes thereof must be located far less among specific than in general conditions, that is, in conditions not susceptible to the control or material modification by the ingenious devices of men or the political power of one nation or another. Depression, overproduction, and overcompetition are today the objects of complaint as they were during the preceding years, and as they are likely to be in succeeding years.

As a matter of fact, German industries, besides dominating the home market, had a fair share of the world's trade; their productions were not materially lessened during the year, and the wages remained as low as the year before.

Individual branches of industry realized good profits; however, the further development of trade must depend upon the increasing influences of German manufactures in the foreign market, and just here the chief struggle begins.

The Government has taken steps towards widening and broadening the markets for German manufactures, especially by subsidizing steam-ship connections with the East, as well as by adopting a colonial system; but whether manufacturers do not rely too much upon state support and state privileges is a question yet to be decided.

I believe the chief burden and chief responsibility lies upon the shoulders of the producers themselves, and that a healthy development of a nation's industries depends upon a free and unrestrained exercise of industrial energy and individual efforts.

Experiments made by some manufacturers to compete in the foreign markets with a supply of inferior cheap goods may be attended

by temporary success, but to secure a firm and constantly growing position in the world's markets, not only the competitors' prices must be beaten, but also the quality of their goods.

As hereinafter mentioned, it is fast becoming a universal practice for many branches of German industry, in order to raise, maintain, or guard against the decline of prices, to resort to syndicates, conventions, trusts, and similar expedients, all of which can not be considered otherwise than as doubtful and artificial means of fostering particular branches of trade at the expense of other trades and the general public, or of doing what in the end natural and legitimate means would do.

STATE SOCIAL LEGISLATION.

The "old age and invalid laborers' insurance bill" now pending before the Reichstag, and soon to be considered and acted upon, is destined to crown the legislative work of the National Government in matters of social reform. The provisions of the proposed legislative measure are of so novel and extraordinary character, and touching upon a subject of so great concern to all civilized nations, that I thought it justifiable to make particular mention thereof, and to give a synopsis of the bill in this report.

MAIN FEATURES OF THE PROPOSED LAW.

I.—*Extent and purpose of the insurance.*—(1) Persons who are unfitted for labor on account of old age, sickness, or who, in cases of accident, are not sufficiently covered by the existing imperial legal enactments in regard to accident insurance, will be insured in accordance with the following regulations:

(*a*) Persons who have been employed as laborers, helpers, journeymen, tradesmen, apprentices, and messengers and have worked for wages.

(*b*) Industrial or trade officials, business partners, or associates and apprentices, including helpers and apprentices in apothecaries, whose yearly salaries do not exceed 2,000 marks.

(*c*) Persons, under pay, employed on board German merchant ships. By determination of the Bundesrath the provisions in (1) may be made applicable to persons carrying on industries independently in their own houses. By action of the Bundesrath it may be also determined how far persons upon whose order or for whose benefit household industries are carried on are to be held responsible as employers toward the house owners, their helpers, journeymen, and apprentices in their employ.

(2) These provisions or regulations are not applicable to officials of the Empire, a Bundesstaat, nor to persons entitled to a pension employed by a community. The same holds good in the case of persons who receive from the Empire a Bundesstaat or community pension, or compensation money, amounting yearly to or over 120 marks; it holds good also in the case of persons who draw from the Imperial Accident Insurance Institution a sum equal to or greater than 120 marks.

(3) Persons other than those mentioned under (2) and who are in the imperial service, the service of a Bundesstaat or communal corporation, are free from insurance duties, in so far as they are assured by the necessary regulations and provisions applicable to the branch of business in which they are employed, of a sum, in case of inability to labor or sickness, equal to the amount set over against their class in the following regulations:

SEC. 10. To those who are employed at work which give them claims under the arrangements of (3) and who afterwards go to work in a branch covered by (1) credit is to be given for the time served in the former.

(4) The Bundesrath can determine that, and in how far the provisions under (2) (P 1) shall affect officials who are entered, with pension rights, on the books of other unions; also, how far the provisions under (3) will affect members connected with unions whose object is to insure against sickness and old age.

In the case of old age or invalid insurance payment takes the form of an annual rent (annuity). The aged must be cared for, regardless of ability or inability to labor, after they attain seventy years.

Invalids receive pension (care) when it can be shown and proved that they are fully and permanently disabled so as to be unable to work. Fully unable to work, in the

provision, means that a person who, in consquence of his mental or physical condition, is neither able to perform his customary work regularly, nor able to earn, from his opportunities or the exercise of his remaining powers, a sum equal to the least amount granted under the law.

(6) Through statutory enactment of a community for its district or of a union of several districts for a combined district, or a part thereof, according as the custom prevails of paying for labor, wholly or in part, is made up of products, can it be determined to pay two-thirds of the pension in products, said products to bear the average estimated value or prevailing price. These communal statutes must have the sanction of the higher authorities. In cases where the provisions of this paragraph are carried out and products (*Naturalien*) are paid instead of money, the claim to an amount equal to the amount given in products to the latter falls to the commune making the payment.

(7) Insured persons against whom it can be proved that, purposely or by willful assistance, such as engaging in quarrels, rioting, or by vicious and irregular habits of life, they have unfitted themselves for labor, shall have no valid claim to invalid pension. They may, however, after having paid ten years' subscriptions into the funds, receive, temporarily or permanently, a part of the pension. This, however, is to be granted, when granted, not as a right but as a favor. Furthermore, besides the conditions laid down in (6) in regard to proofs of old age or inability to labor, the following are necessary: (*a*) A period of waiting of thirty years (see 8 and 9); (*b*) the payment of subscriptions (see 10, 11, and 12).

(8) The period of waiting (7) consists: (1) For claims on account of old age, of thirty years, with payment of yearly subscriptions. (9) (2) For claims for invalid pension, payment of contributions for five years. No period of waiting will be required when it can be proved that the inability to work is the result of sickness contracted by the laborer at his work, or caused by said work. Such persons who, before the expiration of their period of waiting, from any cause other than those specified, should become unfitted for work, can upon application have one-half of the lowest pension amount allowed them, though as a favor (*Billigkeits-Gründe*), and then only upon the condition that they have made, at least for one year, the payments provided by law. Such a part pension can not be granted, however, when it can be proved that said person was already partially unfit for work when he entered as candidate for a pension and that he became a subscriber simply for the purpose of obtaining the pension.

(9) A subscription year shall consist (8) of three hundred working days. All days in excess of 300 in which a person works and pays the subscription will be carried over and placed to the next year's time, and hence to the credit of the period of waiting.

Persons who, after being enrolled on an age or invalid list, are unfitted for work by sickness, or are taken away from work by the voluntary fulfillment of military duty at mobilization of troops, or who in time of war are summoned to serve in the field or in the navy, will have the time so employed counted as working days in adjusting their time for and claims to a pension.

(10) The moneys necessary to cover these pensions will be furnished by the Government, the employers, and the employed, each party furnishing one-third. The collecting of the money shall be made by the Government assuming the payment of one-third and placing funds to meet such payment, and the other two-thirds shall be collected from employers and employed at stated periods.

(11) The subscription must be paid by each person insured upon every regular pay day, and must be for the number of work days between that day and the last day of payment. Every employer has to pay in the full two-thirds and then re-imburse himself by deducting the employé's one-third from his or her wages at the time of each payment.

A full day's contribution must be paid for a fractional part or parts of a working day. In cases where doubt arises as to which employer should pay, the one for whom the workman has been employed during the first working hours of the day shall pay.

In cases where persons are paid by the week, month, etc., six days shall be reckoned in each week as working days. The amount of the contribution for each working day is to be previously determined by each class of insurance institution, in order that the necessary amounts for the reserve funds and two-thirds of the capital necessary to cover all claims which may arise against the institutions on account of pensions.

The obligation to pay falls uniformly upon all persons in the insurance district who are employed and are under obligation to insure, with this difference only, that females pay only two-thirds as much as males.

(12) A claim for a full pension is good only when the claimant has paid the contributions for three hundred working days in each year from the time of enrollment,

(a) By putting to the workman's credit all the days in a year over three hundred in which subscriptions have been paid.

(b) By putting to the workman's credit the increased payments of the later years of an insurance period, if also, in so far as these the interest on interest on the deficiency from the time of the deficiency until its making up are in this way made good. The basis of interest must be set by the Bundesrath.

(c) Through voluntary payment of back dues, including interest and interest on interest, plus the amount which the employer would have had to pay, persons can be re-instated on the insurance rolls.

(13) The annuities will be based upon the calendar year. The invalid annuity will be for men 120 marks, and after the first fifteen years 4 marks will be added each succeeding year; highest payment, however, not to exceed 250 marks per year. The old-age annuity will be 120 marks. As soon, however, as a person receives invalid annuity he loses his claims to old-age annuity. Women receive two-thirds of these annuities, or 80 marks annually. During the time old-age persons live out of the Empire the payments will be suspended. If the person having right to a pension emigrates the insurance establishment can settle with him by payment of three times the amount of a year's annuity. The payment of an old-age annuity begins with the first day of the seventy-first year; the invalid annuity with the day on which the person becomes unfitted for work.

(14) In case it should appear, after a time, that a person receiving pension is not entirely unfitted and hence not to be regarded as permanently disabled, the annuity which has been awarded him can be taken away.

Within ten years from the passage of the law and within each succeeding ten years the imperial insurance bureau has to determine the amount of money which each workman has to contribute for each working day.

Until some regular subscription has been fixed upon, each insurance branch has to collect per capita of each working man 4 pfennigs (about 1 cent) and of each working woman 2½ pfennigs per day; one-half of which to be borne by the laborer and one-half by his employer.

According to statistical classification of 1882 the persons falling under the provisions of the proposed law and becoming liable to the payment of dues therein provided will amount to the number of 12,208,986, viz:

Males	7,743,927
Females	4,465,059
Total	12,208,986
Single	8,247,263
Married	3,443,103
Widows or widowers	518,620
Total	12,208,986

AGES.

Under 15 years	519,820
From 15 to 20	3,331,349
From 20 to 30	3,951,873
From 30 to 40	1,880,697
From 40 to 50	1,241,150
From 50 to 60	791,033
From 60 to 70	432,431
From 70 and over	120,637
Total	12,208,986

EMPLOYMENT.

Factory operatives, farm labor, artisans, etc.:		
Males	7,016,326	
Females	2,823,280	
		9,839,606
Domestic servants		1,324,988
Day laborers		397,381
House industry		339,601
Total		12,208,986

As appears from the above figures, from the 12,000,000 persons coming within the law as insurers and assured, the number of 120,637 would presumably attain the age of seventy years and become entitled to old-age pension. On the basis of the aforesaid number of assured, the number of invalids has been calculated to approximate 207,592. Total number of persons entitled to draw invalid support or old-age pension:

Males	234,956
Females	93,233
Total	328,209

At the proposed pension rate (120 marks per annum), these beneficiaries would have to receive per year 35,654,960 marks, while the annual contributions of 12,208,986 insurance members, at the rate of 12 and 8 marks respectively per capita, will produce 128,647,596 marks.

I have given the figures in order that, at a glance, an idea might be had of the gigantic dimensions of the measure, of the complicated obligations and heavy work it imposes, and of the enormous apparatus that will necessarily be required to organize under the law and to enforce and carry it into effect.

In connection with the matter I can not forbear to state that public opinion in Germany seems to find no fault with the projected measure on account of the exercise by the State of a parental power adverse to the modern principles of individual self-control; nor have I come across public expressions objecting to class legislation or to the compulsory nature of the insurance system sought to be sanctioned by law. Whatever opposition exists seems to be principally directed either against the expediency of the measure as far as a whole or against one or another of its provisions. Especially is it claimed and argued by friends of social reforms that the proposed measure on one hand was silent upon the all-important question of wages, and that it failed to provide for that numerous class of laborers compelled to work at starving prices; while, on the other hand, the fixed rate of allowances to invalid and old-age laborers (120 marks per annum, or about 8 cents per day) was neither adequate to the burdens and obligations imposed nor calculated to render timely or sufficient relief to those concerned.

To show the insufficiencies of 8 cents per day for one person's livelihood, reference is being made to published calculations recently made by Dr. Becker, the Berlin statistician, according to which the minimum amount required in Germany for support and maintenance of life is 18 cents per day, namely, 11 cents for food, 3 cents for clothing, 2 cents for dwelling, 1½ cents for light and fuel, and two-thirds of a cent for sundry purposes.

MILITARY LEGISLATION.

The most important imperial legislation is that affecting the military system. A recent amendment to the constitution provides that each person fit for military duty shall serve seven years in the standing army, generally from the completion of his twentieth to the beginning of his twenty-eighth year. The first three years shall be in active service (under the flag), the last four in the immediate reserve. The next five years of his life, after his twenty-seventh year, shall be

in the ranks of that part of the landwehr first liable to be called into active service. The succeeding years, until he has reached his thirty-ninth year, will find him under orders in that part of the landwehr which must respond to the second call to active service; that is, to the month of March of his thirty-ninth year.

Persons enrolled in the second order of the landwehr have the following things in their favor:

(1) They shall not in times of peace be mustered into practice.

(2) Their report to their regular officers can be made by members of their families.

(3) Except in time of war or when especial preparations are being made because of danger of war they need no special permission to emigrate, it only being necessary before going to announce that fact to the competent military authorities. A neglect to give such notice of intention to leave may be punished under section 360 of the imperial penal enactments.

(4) In cases where persons can show and prove by a consular attestation that they have secured a sure and independent position in some foreign country, such as a business man, manufacturer, etc., the permission and its privileges can be extended to the limit of time when according to law service could be exacted, and even exemption from recall to service in time of mobilization may be allowed.

SEC. 6. In case of family demands or special trade relations, persons in the reserve and landwehr classes 1 and 2 may be exempted from mobilization, being placed for orders behind the last year's class of the No. 2 landwehr forces; provided, however, that the number of such exempted persons does not exceed 3 per cent. of the entire reserve and landwehr force.

SEC. 7. In order to make up the first list, all those persons born in 1850 or later, and who have served out the required time in the standing army and landwehr, or those who have been through the full period of complementary reserve duty and have gone over to the landsturm, must, inside of four weeks after these laws go into effect, report themselves, either in writing or personally, to the officers of their landwehr company. For persons outside of Germany, or those making a journey, this time of reporting will be extended to September 30 of the year 1888.

SEC. 2. The complementary reserve will serve to fill up the army at a time of mobilization and for the formation of reserve. There must be so many persons enrolled in the complementary reserves as to cover, with the members thus enrolled in each seven years, the first demand to follow a mobilization of the army. In the first place there shall be enrolled in the complementary reserves those persons who presented themselves for service, but who, because of drawing a higher lot, failed to get into the immediate active service. If more are then needed they shall be taken from the ranks of: (*a*) Those able-bodied persons liable to military duty whose enrollment will not affect injuriously their families or households; (*b*) those persons who, on account of some small bodily failure, were exempted from active service.

SEC. 15. The complementary reserve period covers twelve years from October 1 of the first year of service. After serving in this class the soldier goes over to the landsturm. The reserves may be drawn into service once a year—in the spring. They are in duty bound to drill in times of peace. The first year after going over to the reserves they serve ten weeks, upon the next call six weeks, and the last before going over to landsturm, four weeks.

SEC. 3. Seawehr and marine reserves. The provisions applicable to the landwehr found in section 2 are also applicable to the sea defenses and marine complementary reserve. The sea defense (wehr) will be divided into two classes, those to respond to a first and those to a second call.

SEC. 4. It will be the duty of the landsturm to defend the Fatherland in case of war. In extraordinary cases men may be transferred from the landsturm to active service in the land or naval forces. The landsturm will consist of all those persons not in army or navy liable to duty between the ages of 17 and 45. It shall be divided into two classes. The landsturm men of the second class will be divided into special classes. The call to arms of the landsturm follows an imperial edict in cases of immediate danger or cases of need through the general commanding, the governors, or fort commanders. After the summons has once been made the provisions affecting those serving in land or sea wehr are applicable to those serving in the landsturm. The summons to the landsturm will affect classes in the order of years, beginning with the youngest, that is, so far as the country's interests permit of such action. Persons in foreign lands are in duty bound, when they have not been exempted, to return, upon the landsturm being summoned, and present themselves for service. Those who can show by consular attestation that they have an

independent position as merchant or mechanic in some foreign country may be exempted from the provision requiring their return. If the landsturm has not been summoned those liable to do duty in its ranks shall be exempt from all military control and practice.

The landsturm must be provided with clothing, weapons, and all other military accoutrements necessary in service.

The carrying out of this law enables Germany, if necessary, to put 6,440,000 fighting men under arms. Of these the active force will consist of:

ACTIVE ARMY.

Men actually serving, 1,059,000. Her force of trained soldiers composed of said active men, plus reserve and landwehr, reaches 2,950,000 men. The number of those able to bear arms and liable to draft, but not yet trained and not comprised in the foregoing, reaches 3,255,000. The special requirements, equipments, arms, etc., under this new enactment will call for an immediate expenditure of 280,000 000 marks.

LIQUOR LEGISLATION.

An act of the German Parliament, approved June 24, 1887, had for its object the levying of an excise tax at the rate of 11.9 cents per 1.0567 quarts to every quart of pure alcohol contained in liquors, provided the amount of alcohol consumed equals 4.75 quarts to each person in the Empire, taking the last census, and 16.6 cents if the amount consumed is larger. Distilled liquors, if exported, and distilled liquors used for industrial purposes in the production of vinegar, for sanitary and scientific and for various domestic and mechanical purposes are exempted from this tax. Section 12 of the act provides for the repayment of the excise duty upon alcohol which has been used in trade, when it is shown that the manufactured articles have been exported.

Under the new act there will be but one "ardent spirits tax union," whereas previous to its passage there were two, Baden, Bavaria, and Wurtemburg forming one, and the remaining provinces the other. A second part of the enactment deals with what is called the "mash-tub tax," a tax on the capacity of the vessels used for mashing; also of a tax on the material used in making spirituous liquors. The act then goes on to discriminate in the matter of distilleries using farinaceous and non-farinaceous substances in the distillation processes, also in the matter of quantities mashed. Certain privileges are allowed and conceded upon petition, all of which are set forth in the act.

Increased rates of duty on imported liquors.—Arrac, cognac, and rum imported are taxed under the new act at the rate of $29.75 against $19 before the act was passed.

The immediate effects of this act were twofold, first an extraordinary impulse to the import of foreign liquors, and dullness in the home manufactures.

Export premiums.—The payment of 48 marks for each hectoliter exported gives back to the manufacturer the 16 marks paid as tax, plus a premium of 32 marks. If, as is supposed, there is 100,000 hectoliters on hand and half of this is exported the government is to lose something between 30,000,000 and 50,000,000 marks. This loss, however, will rapidly be covered by the replacement of the exported quantities by others of home product, which will have to pay 50 to 70

marks per hectoliter. It was expected that agricultural distillers were to be benefited by this tax; the expectations are yet to be realized. This tax, objectionable as it may be to consumers, is looked upon with less disfavor than the "monopoly spirit bank" which one time threatened to absorb most of the profits of this important branch of manufacture.

CANNED GOODS LEGISLATION.

A law affecting the trade with articles containing zinc and lead has recently passed the German Parliament. At a recent meeting of the Berlin Association of Grocers, it was stated that the law in question would exercise a disastrous influence on the entire German trade in preserved viands packed in metal boxes. The law forbids the use of boxes consisting wholly or partially of lead, or with a lining containing more than one per cent. of that metal. The soldering of the boxes with lead is also prohibited. In the event of this law being broken, both the producer and the retail dealer are made responsible for the irregularity. The penalty includes a fine and the confiscation of the condemned goods. The law comes into force on the first of October, 1888. Now, according to the terms of this regulation, nearly all the preserved-meat tins and metal packings hitherto in use will have to be thrown away, as failing to fulfill the requirements of the act. They petition for one of two things; either that all German preserved viands in stock in Germany on the first of April, 1888, may be sold out, or that the enforcement of the law may be deferred until the first of October, 1889. As to preserved viands of foreign extraction it is suggested that the import of these goods should be exclusively controlled by the custom-house officials on the German frontier.

The consumption of preserved meats is very large in Germany, hence the importance to packers in our country to know the tendency of legislation in this country in regard to their products.

OLEOMARGARINE LEGISLATION.

The hostility of producers of butter from milk to producers of oleomargarine or artificial butter caused an act to be presented to Parliament, the object of which was to compel producers of artificial butter to so designate their wares as to preclude the possibility of their being sold for real butter. Pending legislation, expert testimony and experiments demonstrated that oleomargarine was not only not harmful but rather a healthful article of food; that it was in no way a competition butter, since the people, generally the poorer classes, who used it, had never used butter, but lard instead; that trade in lards were affected somewhat by its sale; that the process of making butter by chemical processes from fats had led to increased profits to farmers and producers; that its cheapness enabled persons to buy and use it who could never afford the real butter. It was further demonstrated that oleomargarine, subject as it is to governmental inspection and supervision, is far from a dangerous commodity of commerce; that the decrease of prices for real butter which have lately prevailed were due more to the fact that large quantities of real butter over and above the demand have been produced, as if in anticipation of repressive legislation against oleomargarine. In order to show the great dimensions the oleomargarine industry has assumed, I submit the following statistics in regard to its manufacture and trade:

There are in Germany 50 factories employing 460 workmen producing 180,000 centners of butter worth 9,000,000 to 10,000,000 marks. In the production of the 180,000 centners 2,000,000 liters of milk, worth 200,000 to 225,000 marks, are used. Besides 140,000 centners of oleomargarine are used, of which 100,000 centners are produced at home, the fat of half a million head of cattle being necessary for the supply. This raw fat represents a money value now of 6,000,000 to 7,000,000 marks, while previous to the manufacture of artificial butter it was valued at from 3,000,000 to 4,000,000 marks. The increased value of fats is in the agriculturist's favor, while, as stated above, he suffers nothing in competition with his milk butter.

TARIFF LEGISLATION.

Par. 1. The tariff proclaimed May 24, 1885, has been changed to read as follows:

(1) In No. 9, grain and other products of agriculture receive the positions *a*, *b a*, B, 7, 8, *c*, *e*, and *f*, the following rates per 100 kilograms:

	Former price.	Present price.
	Marks.	*Marks.*
(*a*) Wheat	3	5
(*b*) a Rye	3	5
(B) Oats	1.50	4
7 Buckwheat	1	2
8 Legumes	1	2
(*c*) Barley	1.50	2.25
(*e*) Corn and dan	1	2
(*f*) Malt (malt barley and oats)	3	4

(2) In No. 25 c, the duty on all kinds of lees, except wine lees, has been raised from 42 to 65 marks per 100 kilograms.

(3) In No. 25 q, the duty (*a*) the position 1 a, starch, powders, arrowroot, sago and sago surrogate, tapioca, etc., has been changed from 9 to 12.50 marks; (*b*) the position in 1 B, maccaroni, nudeln, 10 to 13.50 marks; (*c*) the position 2, flour from grain and legumes, etc., from 7.50 to 10.50 marks per 100 kilograms.

PROPOSED NATIONAL LEGISLATION.

Sunday Labor.—A bill in regard to Sunday and holiday labor pending in the Reichstag provides that manufacturers shall not compel their laborers to work Sundays and holidays. They must not employ them on Sundays and holidays in factories, workshops, or in building. The owners of stores, etc., must not work their employés on Sundays and holidays longer than 5 hours; such (employés) must all work at the same time. Work on repairs on which depends the continued work of any foreign factory and also work of a nature not admitting of delay or stoppage do not come under the above regulation. In such latter cases every workman in every factory, workshop, or building business must have every other Sunday from 6 a. m to 6 p. m. at his leisure. The Bundestag shall decide what kinds of business do not allow of delay, stoppage, etc. By action of the Bundesrath special exceptions can be made. The stipulations of the Bundesrath must be laid before the Reichstag not later than during the next following session of the same. In urgent cases the local police authorities can allow working on Sundays and holidays. Every such order must be issued in writing.

The local police authority must make a list of all such exceptions granted and present the same every quarter to the superior authority for factories, and also the special inspection officers. The penalty for non-observance of the above regulation is 2,000 marks, or in case of no property, six months in prison.

Causes assigned for such legislation.—Discussion has demonstrated that rest on Sunday from heavy labor is absolutely essential to the preservation of the workingmens' health. And this can only be in full measure secured when to Sunday rest from heavy labor is added a shortening of the number of working hours on Saturday.

WINE LEGISLATION.

Another important branch of the year's proposed legislative enactments is affecting the wine industry. A desire to secure the wine merchant and public against cheap adulterations resulted in the proposal of a law prohibiting the use in the preparation of wine of many ingredients heretofore generally employed, and in many instances regarded as both necessary and profitable. The new law prohibiting even the use of sugar will seriously affect many small dealers and producers, and at the same time leave the market liable to a much inferior quality of wine. Long experience, accompanied with an honest desire to maintain a good name, had led many dealers to add sugar to qualities of wine which were somewhat deficient in that substance. Far from injuring or adulterating the wine in a bad sense, the process, when skillfully applied, as in most cases it is, produces a much superior quality of wine to what the market would get were the producers not allowed to add sugar when a deficiency is discovered. The best sugar and the best method of its application are always used when the wine is in its fermentation, and sugar is an essential component part of good wine. The parliamentary committee charged with the consideration of the proposed act report that many ingredients, such as barium, metallic lead and lead combinations, glycerine, magnesia combinations, impure alcohol, etc., must not be added to wines intended for sale as an article of food or enjoyment. Wine containing more sulphuric acid to the liquid liter than is found in three grams of sulphuric Kalium must not be offered for sale.

GRAIN EXPORT BILL OF IDENTITY.

Powerless to prevent the imposition of the increased tax on foreign grain, dealers began to look about them for a sure and safe method of extricating themselves from the almost helpless position into which the passage of the law flung them. The abolishment of the bills of identity appears to be the one thing desirable. These bills of identity are given shippers in North German ports who are exporting via Rotterdam or Antwerp to South German ports. These bills secure the passage of North German grain over the Sotuh German border free of duty. These bills of identity once done away with, northern merchants could again sell their grain in England, Holland, and the Scandinavian country, where northern grains have long been popular, and return to South Germany with ships laden with grains, the more popular American and foreign, bought at cheap prices in the world's markets. South German shippers say that they would be willing to buy the papers, now become " bills of

quantity," from the northern merchants, and use them in their import business, for it is only meant to give the northern exporter privilege to bring in, free of duty, just as much grain as he exported.

Some southern houses seem to see danger in this system. The North German dealer, they say, may find large, if not double, profits in selling his own grains abroad and then dealing in foreign grains in South Germany; but this is hardly probable, since he will be compelled to meet the world in England's and Scandinavia's markets, and will hardly find it more profitable to await the dull delays of trade than to give his bills of privilege to South German dealers for as much money as he can get. So many opinions and windings do there seem to be that a legislative labyrinth is possible.

PROPOSED LEGISLATION FOR THE PROTECTION OF BIRDS.

The indiscriminate slaughter of birds, so common in many parts of Europe, is one of the most crying evils of the day. If for no other reason than those dictated by æstheticism, these little winged creatures have claims upon human protection. The appeal comes to men from all sides and is made by birds of all varieties. Our song birds, those which once sang glad songs among the blossoms of spring and built their nests among our trees, delighting our little ones, are gone or are fast going. It is only a question of time when the meadow lark, which sprang up in our path in the fields, trilling his notes of ravishing sweetness, delighting the ear long after the tired eye had lost power to follow him into the sky, shall share the robin's fate by disappearing from our fields and gardens. The friends of poor little tom-tit, the most genial of all man's feathered friends, comes to the German Government with an indignant protest, supplemented by an appeal. In the autumn and early months of winter thousands of these gay little fellows are killed and trapped in the Thuringian forests, whence they find their way as delicate tidbits to the tables of gourmands and epicures in large cities. The thrush, fleeing from the cold of a Russian winter and Baltic breezes, finds himself tangled in the meshes of thousands of horse-hair nets and shares the same fate. The northern thrush is classed by ornithologists among our most useful insect and worm destroying birds. Thousands in their flight southward beat their little heads against the light-houses along the coasts; other thousands, landing to rest their weary wings on the island of Heligoland, are brutally beaten to death with clubs. Escaped from the perils of the sea, they seek shelter among the woods of middle Germany. Hundreds of traps are now set for them among the branches of the juniper bushes, whose berries constitute much of their winter food, especially when because of the snow they can find no animal food. Sometimes in one day a hunter bags a hundred thrushes caught and strangled in his horsehair meshes. Did men but stop to think, when eating these dainty morsels, how little need they have of such and how much life and freedom means to these little creatures, if one can judge from their glad songs and merry ways, would they not pause and ponder over the sufferings endured by these little fellows, and would they not refuse ever to eat another one? Not only is the thrush caught in these meshes, but great numbers of other birds, notably the red breasts and white breasts, larks, barley birds, and goldfinches. This is easily understood when we learn that the traps are often left to do wanton work, because the bird-catchers have been too lazy to go

and remove them after the thrush season has passed. Thus they remain to snare the springtime and summer songsters. People in the country, subject to many inconveniences and money losses from annoying and destructive insects, are indignant at the wholesale destruction of their bird friends, but they are powerless. Time was when newspapers cried out against Tom and Tabby, the barn cats, because in a dearth of mice and rats, caused by their own faithful watching, they took to killing a bird or two. But here is destruction little less than wanton going on by the wholesale. Then again newspapers set up a hue and cry against the destruction of birds in Italy and the Mediterranean country, where they were a necessary article of food. It is time, say German writers, to look at home and do that which is to be done at our own door. So long as Germans eat these little birds as luxuries or delicacies no international action looking to the protection of birds on the shores of the Mediterranean is possible, for there they serve as necessary articles of food. The importance of the trade in such birds is infinitesimal compared with the great injury resulting from their destruction. So from a commercial economic standpoint the destruction of our song birds is attended with incalculable losses. Then what must the effect be upon a nation's finer feelings, the æstheticism of the mind and feelings of the heart, where such wanton cruelty is practiced?

The recent movement in the United States looking to the protection of birds influenced me in giving some attention to the subject here. The tendency is to find some way of projecting an international law protecting most useful and pleasure-making friends of mankind.

POPULATION.

With the exception of Sweden, Norway, Denmark, and Ireland, Germany is losing most by emigration. During the last decade she lost 1.9 to the thousand; Great Britain, exclusive of Ireland, 1; Austria-Hungary, three-quarters, and Italy 1½ to the thousand. The losses of the Netherlands and Belgium were less; while France actually gained by immigration 1½ to the mille. Still, Germany ranks high in the growth and increase of its population, and exceeds that of Austria, Italy, Switzerland, Norway, and, beyond all, that of France, with her average growth of 4½ to the thousand.

The disproportionate greater number of births and moderate rate of deaths account for Germany's outranking other countries in the increase of population.

Of the foreign countries named, Cisleithanic Austria has more births in proportion to population than Germany. France has least of all. Germany's average births within the last decade were 37 per mille against 25 in France. Natural increase in population is 12 to 13 to the thousand in Germany against 3 to 4 in France.

As regards its component parts, the German population presents a different picture from France. Against 490 males in Germany France has 560 to the thousand. Germany's children under 15 years of age number 356 against 267 in France. Between the ages of 15 and 60 Germany has 565 against 610 in France; but the number of men between 25 to 30 years is smaller in France than in Germany; the latter has 5,200,000 and France 4,270,000.

The following table, based on statistical figures, shows marriages, births, and deaths having taken place in Germany and France during 1886:

	Population.	Marriages.	Births.	Deaths.
Germany	47,103,0 0	372,318	1,814,444	1,302,049
France	38,219,000	283,198	956,363	908,808
[Per 1,000 people.]				
Germany		7.9	38.5	27.6
France		7.4	25	23.6

It appears from these figures that marriages in both countries are about even pro rata; that the rates of deaths were 8 per cent. higher in Germany than in France; but that in regard to births France remains behind prolific Germany the number of 512,395 in one year.

EMIGRATION.

The number of Germans who emigrated to countries beyond the sea during the year 1887 has been, as appears from the following table, 99,712, exclusive of those persons that may have embarked at other than German and Dutch ports.

The number given shows that the emigration exceeds by 40 per cent. that of 1886, and by 10 per cent. that of 1885; failing, however, to come near to the figures of 1884, 1883, 1882, and 1881.

From the general outlook it may be safely predicted that in the immediate future, and in the natural run of things, an average number of 100,000 of the German population will yearly emigrate; nine-tenths of whom to the United States.

Census returns develop the fact that 28 per cent. of all the emigrants were males, ranging in age from fifteen to twenty-five years, and that sexes are about equally divided.

It is gratifying to know that the stream of German emigration will continue to flow into the United States in preference to all other countries, and that the efforts made by over-zealous patriots during the last ten years to direct the course of German emigration to South American and other transatlantic countries have failed to be attended with success, and more than ever is the fact generally recognized that no other country on the globe can enter into competition with the United States in attracting emigration of persons who leave their native land to seek freer, safer, and better homes.

The good qualities of the German people emigrating to America, their culture, industrious habits, and innate attachment to freedom and individual liberty, vouch for their true allegiance to the adopted country as well as for the faithful discharge of duties appertaining to American citizenship, and in both respects the German emigration must be considered as an eminent economic gain to the country of adoption and as a valuable factor in the development of its resources.

If economic worth of emigrants lies in the amount by which his productive ability exceeds his consumption no class of emigrants can be more desirable than the Germans, they being known as frugal,

thrifty, and saving, and with their labor successfully employed will individually soon prosper and eventually contribute their full share towards production and increase of national wealth.

A German national economist of repute, in estimating the loss to the fatherland by emigration, has arrived at the result that each emigrant represents, in addition to the money he takes with him, a capital value from 800 to 900 marks; when multiplied by a yearly emigration of 100,000 persons will represent a loss to the country emigrated from from 80,000,000 to 90,000,000 marks per year.

The total yearly consumption by the German people for support and enjoyment of life has been estimated by Dr. Engel at 14,000,000,000 marks, in items as follows:

Articles.	Marks.	Articles.	Marks.
Food	7,598,646,000	Fuel and light	931,276,000
Clothing	2,059,678,000	Sanitary purposes	436,359,000
Dwelling	1,204,810,000	Sundries	1,856,296,000

This, equally divided among 47,000,000 of inhabitants, would give to each person 86 pfennigs per day.

German emigration during the years 1877 to 1887, via German ports and via Antwerp, Rotterdam, and Amsterdam:

Year.	Number.	Year.	Number.
1877	17,783	1883	133,954
1878	19,575	1884	129,345
1879	25,546	1885	91,082
1880	79,957	1886	61,734
1881	172,584	1887	99,712
1882	160,966		

TRADE BETWEEN GERMANY AND THE UNITED STATES.

According to the consular statement the values of the German exports to the United States during the year ended September 30, 1887, were as follows:

From Berlin consulate-general district	$40,487,473.82
From Frankfort-on-the-Main consulate-general district	43,307,157.01
Total	83,794,630.83
Showing an increase over exports of same period of preceding year of	7,206,585.65
The North German districts show a decline in the export to the United States to the amount of	2,562,726.60
And the South German districts an increase of	9,773,312.21

In spite of the increase in some districts in the North German district the same were not large enough to cover the decline in Hamburg export; a decline which is chiefly concerned with one article, sugar.

Official returns in regard to the values of export trade from the last half of the year 1887 have not been published, and are therefore not attainable but it is known that from January to July, 1887, the export trade increased 76,000 centners in toto, but was less than in

1886, particularly in pig-iron, sugar, locomotives, engines, spirit, and iron manufactures. Exports of textiles and woolen goods have increased during the current year.

Germany's increase of exports to the United States, and in general, is due to its plus of productions of textiles, leather goods, dyes and chemicals, and sugar; and more particularly to cotton, woolen, and silk manufactures, inclusive of braids, trimmings, and ladies' dress goods.

Schedule marked C shows the values of the principal articles exported from Germany to and the import into Germany from, the United States.

Principal articles of imports into Germany from the United States for the current year 1887.

Articles.	Value.	Articles.	Value.
Wheat	$633,281	Tobacco	$5,859,731
Wheat flour	216,238	Wood	54,169
Indian corn	1,302,960	Agricultural implements	155,363
Corned beef	126,480	Books, cards, etc	71,583
Pickled beef	122,338	Sewing machines	384,610
Tallow	84,393	Steam engines	226,349
Bacon	147,313	Sole leather	309,764
Lard	3,963,908	Peltry (furs)	799,180
Butter	79,188	Oil cakes	593,008
Cotton	26,396,011	Turpentine oil	384,223
Refined coal oil	8,526,534	Coal	12,186
Unrefined coal oil	90,716	Sugar	84,310

Imports of merchandise into Germany from the United States and total exports from Germany to the United States for the years 1880 *to* 1887, *inclusive.*

Year.	Imports from the United States into Germany.	Exports from Germany to America.
1880	$66,535,773	$45,004,259
1881	64,131,258	51,152,963
1882	56,845,340	64,467,868
1883	67,312,682	63,219,019
1884	65,999,347	66,650,719
1885	58,996,019	59,768,743
1886	60,963,857	76,589,045
1887	57,316,655	83,794,630

Table showing values of the principal articles exported by Germany to the United States during the year ended September 30, 1887.

Articles.	Value.	Articles.	Value.
Braids, bindings, and trimmings	$2,886,240.92	Hat-bands and ribbons	$981,098.22
Bristles, feathers, hair	1,277,455.18	Hops	2,414,576.46
Bronze powder and leaf metal	624,097.99	Hosiery	5,163,791.49
Books, stationery, etc	2,357,837.89	Iron-ware	6,687,918.17
Buttons and button stuffs	745,240.48	Leather, hides, and skins	1,562,148.90
China, glass, porcelain, and stone ware	1,644,554.54	Linen, woolen, and cotton goods	7,178,335.34
Corsets	568,556.01	Manuring salt, kainit	1,060,298.31
Cloth	1,235,379.61	Prunes, dried fruits, land produce	1,013,797.98
Dress goods	1,756,811.73	Portland cement	711,110.41
Dyes, drugs, etc	5,902,164.55	Rags, waste paper	1,479,943.06
Fancy goods, toys	2,236,421.35	Silk	8,370,271.01
Glass-plate, window and mirror glass	2,322,072.23	Steel, manufactured and bessemer	1,608,926.96
Gloves	3,427,396.00	Sugar	3,085,087.28
		Wine, brandy, beer, and liquors	1,548,324.70

In comparing the foregoing figures of export and import, it appears that Germany's export to the United States has in 1887 reached the enormous sum of over $83,000,000 (one-eighth of the total German export), that three-fourths of its export values consist in manufactures, of which labor forms a very considerable ingredient, and in articles of comfort, fashion, attire, and adornment, while on the other hand the merchandise imported into Germany from the United States is almost confined to indispensable necessaries of life.

Germany's total foreign export and import, 1880–'86.

Year.	Import.	Export.
1880	$913,920,000	$723,520,000
1881	871,080,000	709,240,000
1882	744,940,000	759,220,000
1883	775,880,000	778,200,000
1884	781,890,000	778,022,000
1885	711,620,000	693,770,000
1886	.....	.....

The considerable rise in the American demand for various articles manufactured in Germany has proven highly beneficial to the German trade, and particularly to branches of industries more or less dependent upon American custom. Germany is profiting largely, directly and indirectly, from the increase of German and European export to the United States, although the lion's share fell, as a matter of course, to Great Britain, which country is, to a considerable extent, a larger purchaser of American goods than Germany.

EXPORT TRADE OF THE WORLD.

The figures of the comparative value of the world's export trade during the years 1880–'85 give an interesting picture of the struggle which is going on between the different nations for the domination of the world's market.

It is important to note that England has strengthened her position in cotton and sheep's-wool yarns and dry goods, in spite of all crises and strikes. The same is the case with Belgium. Austria occupies the second rank in the above industry, and attains with 10 per cent. a respectable position in linen yarns. In leather and leather goods the leading States are Germany and France, but while the export of France sank from 47.7 per cent. to 38.8 per cent., that of Germany rose from 27.4 to 33 per cent. The share of Austria went up from 6.9 per cent. to 7.3 per cent. In paper and paper goods England waged a bitter war with the German Empire. England's share remained almost without varying at 34.8 per cent., while that of Germany rose from 33.8 to 40.2 per cent.

The share of Austria increased from 8.7 to 9.8 per cent., so that the paper industry of the two German-speaking empires covered half the consumption of the world. In glass and glass goods Germany won ground, the percentage of the former rising from 20.6 to 22.2 per cent. and that of the latter from 19.3 to 22.8 per cent. England's percentage remained constant and that of France and Belgium, respectively, declined. In iron, steel, and iron and steel goods, Great Britain managed to still further develop her supremacy, her share

increasing from 64.2 to 65.5 per cent. The share of Belgium rose from 6.1 to 6.6 per cent., while that of Germany declined from 22.4 to 21.9 per cent., that of Austria from 3.0 to 2.1 per cent., and that of France from 4.3 to 2.9 per cent. In machines England was similarly victorious, and pushed up her exports from 66.7 to 69.1 per cent., while those of Germany showed an inconsiderable rise from 12.7 to 13 per cent., and those of France, Belgium, and Austria decreased; in the case of the last, from 2.2 to 1.7 per cent. The total results show a decline in the value of the total export trade which would have been occasioned under any circumstances by the fall of prices. A comparison of the shares of the individual branches of industry in the total results proves that the largest export was of cotton yarn and cotton goods, and amounted to 29.7 per cent. Then came woolen goods with 18.3 per cent., and finally iron and iron and steel goods with 16.3 per cent. While in 1881 65 per cent. of the export fell to the share of the textile industry, 21.3 per cent. to the iron and machine industry, and 13.7 to the remaining manufactures, in 1885 the percentages were 64, 19.5, and 16.5, respectively, for the same branches of the export trade.

The following is a comparative table of the foreign exports of the four leading commercial nations—Germany, England, France, and the United States—the figures of which show the high position which Germany, whose industrial and commercial importance is proportionately of so recent a date, now occupies:

Year.	Germany.	England.	France.	United States.
	Marks.		*Francs.*	
1886	3,057,000	£212,400,000	3,300,000	$713,300,000
1885	2,960,000	213,000,000	3,088,000	688,200,000
1884	3,205,000	233,000,000	3,223,000	749,400,000
1883	3,270,000	239,800,000	3,452,000	795,200,000
1882	3,188,000	241,500,000	3,574,000	768,000,000

GERMAN AGRICULTURE.

Harvests of 1887.—The grain crops of 1887 in the Kingdom of Prussia were on the whole satisfactory. Owing to the cool and moist weather in the month of May wheat and rye (the most important of German agricultural productions) recovered from the damaging effects of winter frosts, and turned out well; wheat particularly exceeded the early expectation of the farmers by yielding 12½ per cent. in excess of an average crop.

Rye yielded 3 per cent. more than an average crop, of a good quality. Summer grains turned out less favorable. Barley yielded only 92 per cent. and oats 95 per cent. of an average crop. In 1886 oats yielded 13 per cent. beyond average. Crops of legumes, fodder, rape, etc., were middling.

Potatoes, owing to a long-enduring dryness in summer, failed to yield an average crop. The decline in the current year's production, as against 1886, is estimated at 12,000,000 double centners.

The harvest results of 1886 and 1887, respectively, were as follows:

[In double centners.]

	1887.	1886.	Average crop.
Wheat	17,354,608	15,732,053	15,457,609
Rye	56,585,601	54,870,643	54,654,594
Barley	13,512,333	13,731,365	13,755,905
Oats	52,507,221	48,043,761	34,398,255
Pease	3,611,419	3,251,895	3,687,562
Rape and rape-seed	1,068,952	924,601	1,069,002
Potatoes	205,024,416	217,376,195	209,743,123

Hops.—Hops in Bavaria and Baden yielded a full average crop, both in quality and quantity.

Fruits.—The year 1887 will be remembered in Germany as a poor year for fruits. The crops of apples, pears, and prunes turned out total failures in some localities, while in others they were far below average, both in respect to quantity and quality.

Vintage.—1886 was a bad year for German wine-growers, but the year 1887 has turned out to be worse. The cold, wet weather during the ripening month of September frustrated their hopes, which in spring and summer they had good reason to entertain, in the matter both of quality and quantity. The vintage of 1887 has turned out a failure; so much so that in numerous localities it did not repay for labor and care bestowed.

Harvests in Germany for 1878–'79 *to* 1885–'86.

	Area harvested in 1886.	Total crop in tons (of 1,000 kilograms.		Average of hectare.	
		1878–'85*.	1886.	1878–'85*.	1886.
I. Grain, winter and summer.	*Hectares.*			*Tons.*	*Tons.*
Wheat	1,916,633	2,409,097	2,666,428	1.30	1.39
Rye	5,888,902	5,768,074	6,092,849	0.98	1.04
Barley	1,731,480	2,185,270	2,337,206	1.31	1.35
Oats	3,806,535	4,262,245	4,855,894	1.14	1.28
Spelt	372,531	462,217	441,440	1.21	1.18
One-grained wheat (einkorn)	5,328	5,843	4,712	0.87	0.88
Buckwheat	215,561	145,112	129,876	0.62	0.60
II. Legumes.					
Pease	406,526	363,175	314,121	0.81	0.77
Field beans	149,425	185,215	223,211	1.35	1.49
Vetch	163,393	145,551	133,679	0.86	0.82
Lupines	160,377	155,329	109,877	0.76	0.69
III.					
Potatoes (sound and unsound)	2,915,747	22,800,456	25,143,029	8.08	8.62
Beets for feed	381,415	6,675,028	7,191,159	19.18	18.85
Turnips, etc	471,223	3,539,730	3,914,874	8.62	8.31
IV. Commercial products.					
Rape-seed, etc	132,296	174,048	143,675	1.08	1.09
Hops	47,371	24,425	30,208	0.57	0.64
Wine	†120,301	†2,426,256	†1,503,072	†20.31	†12.50
V. Fodder, meadow hay.					
Clover-seed	76,756	14,916	14,801	0.19	0.19
Clover hay	1,810,967	6,123,545	5,559,920	3.37	3.07
Lucerne hay	194,387	957,498	948,958	4.43	4.88
Esparcet hay	108,823	381,919	350,295	3.20	3.30
Other fodder	446,393	729,496	888,464	2.05	1.99
Meadow-hay and second crop hay	5,909,701	18,728,406	17,903,338	3.17	3.03

* Average for eight years (1878–'85). † Hectoliter.

Tobacco culture and harvest in the German Zollgebiet for the year 1886–'87.

German Zollgebiet.	Planters.	Land in cultivation.		Quantity of dry tobacco.			
		Pieces land.	Area.	Kilograms.	Average per hectare.	Average price per 100 kilograms.	Total value.
			Ar.		*Kilograms.*	*Marks.*	*Marks.*
Prussia	100,150	120,178	546,214	10,'27,595	1,982	74	8,019,168
Bavaria	15,170	26,590	344,793	5,823,811	1,689	75	4,425,496
Saxony	57	62	128	2,047	1,593	72	1,485
Wurtemberg	2,797	3,800	24,650	490,720	2,027	82	414,531
Baden	36,493	59,336	689,775	13,345,622	1,935	83	11,110,355
Hesse	2,738	5,825	85,800	1,168,463	1,361	96	1,132,911
Mecklenburg	554	842	14,141	253,590	1,793	71	180,488
Thuringia	675	1,501	10,540	172,969	1,642	81	141,061
Oldenburg							
Brunswick	359	513	3,326	59,846	1,784	63	37,774
Anhalt	476	698	8,590	152,680	1,775	70	107,753
Lubeck	1	1	0½	1	2,500	100	1
Alsace-Lorraine	17,209	27,384	256,081	6,337,02	2,475	74	4,702,307
Luxemburg	39	47	184	2,883	1,562	84	2,422
Total, 1886–'87	176,718	246,777	1,984,303	38,645,753	1,948	78	30,275,751
Total, 1885–'86	175,192	242,257	1,952,859	38,548,185	1,974	75	29,152,040
Increase	1,526	4,520	31,444	97,568			1,123,711
Decrease					26	3	

NOTE.—One ar. = 0.01 of a quadrat meter; 1 hectar = 0.001 of a quadrat meter; 1 kilogram = 2.02 pounds avoirdupois.

GERMAN IRON INDUSTRY.

The year's business (1887) in iron may be classed as satisfactory, especially in the matter of home consumption, rolled and wired iron being in steady if not large demand. Constant complaints were heard in regard to the foreign demand falling far below what manufacturers had expected. English products met German at an advance of from 5 to 15 marks per ton. All through the year efforts were made to form syndicates or analogous combinations for the regulation and maintaining of prices, the number of syndicates already in existence not having been found sufficient to maintain the desired rates. Time alone must decide whether consumption has kept pace with the increased production.

Prices.—The prices obtained were somewhat higher during 1887 than those obtained during 1886, puddling pigs being advanced 1½ marks by the Westphalian Pig-Iron Convention. Bar and finished iron brought 30 marks a ton more in 1887 than at a corresponding period of 1886. Bar-iron advanced three marks, selling at 118 marks per 1,000 kilograms in 10-ton lots.

Germany's iron production for 1886.

	Quantity.
Number of blast-furnaces in operation:	
Puddling and spiegel iron	63
Bessemer	15
Thomas	18
Cast and foundry iron	35
Total	131
Production of blast-furnaces (tons):	
Puddling and spiegel	1,685,439
Bessemer	426,428
Thomas	835,578
Cast and foundry iron	363,828
Total	3,311,273

Germany's iron production for 1886—Continued.

	Quantity.
Pig-iron consumed (tons):	
1871	1,820,274
1876	2,078,490
1886	3,605,599
Pig-iron imported (tons):	
1871	440,604
1873	744,000
1875	625,000
1876	533,000
1885	223,000
Pig-iron exported (tons):	
1872	150,000
1875	339,000
1878	418,000
1881	312,000
1885	250,000

Production for 1887.—The amount of pig-iron production in Germany (including Luxembourg) amounted in September, 1887, to 337,638 tons; of this 168,705 tons were puddling pig and spiegel iron, 34,531 tons of Bessemer pig, 90,408 tons of Thomas pig, and 43,994 tons of foundry pig. The production in September 1886 was 263,702 tons. From January 1, 1887, to October 1, 1887, the total product was 2,849,491 tons, against 2,512,119 for the same period of 1886.

TEXTILE INDUSTRIES.

From the various and often conflicting mass of testimony in regard to the condition of the textile industries it is hard to draw a just and at the same time comprehensive conclusion. Perhaps the best that can be said of the textile industries is that they have in some places been satisfactory, in other places barely satisfactory, not satisfactory, and unsatisfactory. Prominent among the causes for dissatisfaction, and the one most frequently advanced, italicized, and heavy typed, is that the United States have not been buying in as large quantities as expected. "There is a falling off in exports to the United States" is only one form of a statement encountered in hundreds of trade articles. Dress goods, woolens, have in some places enjoyed a fair trade. Carpets have sold well and at good prices. Linen and cotton goods have paid small profits; the hosiery and glove trade, especially that of Chemnitz and the industries of the Wupper Valley, have been very depressed, the former because of a falling off in the United States demand, the latter because of constant disquietude on the Franco-German frontier. No effort is spared to make wares attractive. The refinement and oddities of taste find equal footing before the designer's desk and the dyer's kettles. Though, if truth be told, very loud and very just complaints have been made against goods so poorly dyed that the color came out upon the skin and clothing when worn, and out of the cloth upon the first washing. This was especially true of hosiery goods (poor and cheap are compatible, but poor and dear are not). Fast colors became at last so firm a demand that a guaranty became the only condition upon which sales could be effected. Many times and at many places during the season the mills were kept running simply to give employment to persons too poor to remain idle; and reports are at hand showing that some works ran at loss.

Spinners of worsted yarns are not realizing anything like what they consider fair and just prices. To remedy the situation they propose to hold a convention, similar to those held by so many other important branches of business, with a view to increasing and regulating the markets and prices. The cotton spinners have already held such a convention and formed a mutual protective union. Manufacturers and help are feeding on the pleasures of hope. "Things must surely change;" "it can not go on so forever;" "the Americans must buy, and when they do the situation will be better," etc., are among the numerous expressions to be met "on change." It is of interest to note that while producers of novelties in dress goods enjoyed work the year round, manufacturers of staple articles were oft-times idle.

JUTE TRADE.

The jute trade remained dull until, following the lead of other branches of industry, the jute dealers held a convention, the results of which are manifested in steady trade at profitable prices. This has had the effect of making the jute manufacturers jubilant, a happy state of feeling at all times, but more so in their case, since only so long ago as 1885 many of the small jute mills were running at a loss. How long the profits resulting from these conventional regulations of supply and price are to last is an interesting one, both to theoretical and practical economists. The effects of these conventions are almost immediate. Companies which a short time ago found difficulty in balancing their books without drawing on their reserves are now declaring decent dividends. The temporary advantages now being enjoyed under such artificial nursing are to be more than counterbalanced by the losses, stagnation, and general embarrassment sure to follow such combinations.

LEATHER TRADE.

The leather trade, although one capable of a healthy supply and demand, has nothing to boast of in the way of general trade. Last year special attention was given to what is known in trade circles as "specialties." The effort to bring forth something new and original finds its cause in the temper of the times. An article has scarcely had time to make the circuit of trade before something better, because more original, makes its appearance, clamoring for public attention and favor. Quick sales are necessary if a producer does not desire his warehouses to be filled with stock whose very originality, which once made it sell, is now the reason for it not being any longer marketable. The pranks of fickle fashion are perhaps nowhere wilder or more disastrous than in some branches of the leather industry. Imports of American leather did not materially increase upon those of 1886. The better class of sole-leather from the United States, "oaks" and "union," have not increased, owing to the high duties, but hemlocks have fared better. Belting leather was forced step by step to yield to English manufacture. The demand for the American product "belting leather" is almost nothing. The import of leather for uppers, and especially of "wax splits," has increased somewhat, while buff and morocco are being replaced more and more by domestic products.

MUSICAL INSTRUMENTS.

Pianos.—Trade in pianos of foreign manufacture, which was never before of much consequence, will, in Germany, as it seems, soon be-

long to the things past. Even American pianos, generally recognized to be superior in quality and high finish, will find no market here because of their comparatively high prices.

German manufacturers of pianos, not content to control their home market, are now zealously pushing their trade into foreign lands with considerable success. Australia, particularly, is by manufacturers looked upon as a sale district with which they can not easily dispense; at the approaching exhibition at Melbourne the piano manufacturing industry expect to be very largely represented. During the last few years, however, the Australian market has been somewhat overstocked, which circumstance had a damaging effect upon trade.

The value of German pianos yearly exported is estimated at 18,000,000 marks, and the total production at from 32,000,000 to 36,000,000 marks, a sum which represents the price of about 70,000 pianos. The home trade has increased during the year owing to the hire or installment system, by which persons of moderate means have been able to purchase pianos. During the last four years Germany exported 150,000,000 marks' worth of musical instruments. These instruments found their way via Hamburg and English ports to all parts of the world, mostly, however, to the United States, Mexico, Central America, Brazil, the Argentine Republic, Chili, and Australia. Among the principal customers in Europe appear England, Holland, Austria, Russia, Sweden, Italy, Switzerland, and Belgium, in the order named. Owing to the prices of the instruments becoming much lower, a continued and considerable demand is expected. There is a desire for excellent finish in the matter of form and wood work. It is to be noticed that sales are only possible in very cheap or very good pianos, in the latter case when the name of the firm is a guaranty of good construction and fine tone.

ANILINE COLORS, DRUGS, ETC.

The restless spirit of investigation called into being because of close competition is leading day by day to new and sometimes startling discoveries in the world of chemistry. The old is ever giving place to the new. Dyes which sold at dollars per ounce yesterday are offered to-day at the same price per pound. The mine of wealth so often discovered in the chemist's crucible or laboratory surpasses the dreams of men searching the secrets of gold-making. To find dyes capable of resisting the influences of sunlight and resisting the dissolving influences of water is to find the pathway to wealth. The aniline works here in Germany have been making such discoveries. Old dyes are giving place to the new. Azo dyes have sold very well during the year just closed; this is especially true of those cotton dyes the secret of whose manufacture was discovered in 1885. A series of indefatigable efforts has resulted in producing a number of these particular dyes in yellow, orange, cherry, red, violet, and blue, to meet the rapid demand for which the producing capacity had to be enlarged. The products being well protected by letters patent, and the producers enjoying a monopoly, the profits have been very large. Certain colors, long desired, seem at last to have been obtained.

Statistics of the German custom offices, however, show a decrease of 29,000,000 kilos of drugs, valued at 5,800,000 marks, the last season. Raw stuffs figured principally in the decrease. An increase

in quantity of 21,000,000 kilos, mainly raw stuffs in the chemical substances, is to be recorded, although the values in imports were 15,750,000 marks less than last year; had last year's prices, however, been maintained, there would have been a four-million mark increase of imports over the previous year. The increase and extending of protective duties by other governments are continually narrowing and shortening the once long and wide territory enjoyed by German drugs and chemicals. Business in ordinary drugs was quiet during the season. Slight changes were noted in pharmaceutical preparations. The increase of prices in this class of goods, which were effected at the beginning of the year, were maintained; but a really satisfactory business has not been done and is not expected. In the technical chemical products, especially dye stuffs, the prices obtained by means of conventions have enabled manufacturers to realize good prices. All products unaffected by the conventions showed constant tendencies to decline in price. As in so many branches of business, the all-powerful influence of a convention was resorted to for the purpose of maintaining the prices which legitimate competition would have failed to produce.

The total value of drugs, chemicals, etc., exported to the United States from Germany for the year ending September 30, 1887, was $5,202,164, of which the Frankfort district sent $3,873,854.

The principal part of the aniline colors, etc., are sent to the United States, to England, Russia, and other continental countries, and to China, Japan, India, Australia, and South America.

GROWTH OF THE ANILINE INDUSTRY.

Ten years ago the aniline industry played a very insignificant rôle compared with the magnificent proportions into which it has grown. To-day there are seven large aniline manufactories in the Frankfort general consular district. These establishments give employment to over seven thousand men and two hundred and fifty chemists and technical experts, besides a small army of clerks, business managers, and salesmen. The stock of these companies is among the best on the market, while the dividends are reported to be usually very large. The management of these concerns is deserving of unstinted praise. The triumphs of skill, all the latest improvements in machinery, are employed as soon as discovered. It may not be out of place to add that most, if not all, of these firms have their own agents, men sent out from Germany acting for them in all foreign countries to which they send large shipments.

SALT PRODUCT AND TRADE.

The output of solid salt for the year 1886–'87 was 998,790 tons, 61,195 tons crystal, 362,979 other kinds of rock, and 493,396 tons kitchen salt. The output was larger than for any previous year, surpassing the year previous by 144,489 tons. The export tables show 167,616 tons against 115,794 for 1885–'86. Import tables show a falling off for 1886–'87, the amounts imputed being 26,952 tons, of which 24,051 came from Great Britain. The consumption of eating salt within the German taxing district was 358,640 tons; of other salts, 384,592 tons. The consumption of eating salts during the last ten years has experienced little change, fluctuating between 7.6 and

7.8 kilograms for each person in the Empire. The consumption of other salts, however, especially those employed in Glauber salts and soda factories, has increased in an unusual degree. The customs duties on salts amounted to 2,612,603 marks against 2,776,487 for 1885–'86; the salt tax revenues were 40,214,466 against last year's 39,416,912 marks. After deducting expenses the net takings of both taxes were 42,759,773, against 42,124,500 marks in 1885–'86.

SUGAR PRODUCT AND TRADE.

The year 1887 will long be a memorable one in the annals of the sugar trade, not only of Germany, but of the world. The much-mooted question of doing away with the premiums on sugar was brought before an international congress in London, after it had been before parliaments, finance ministers, boards of trade, and chambers of commerce of many continental countries. Dr. Jacobi, secretary of state for the treasury of the German Empire, explained that the German Government was perfectly willing to enter into negotiations with the representatives of other nations to devise and facilitate measures for doing away with the objectionable features of the premium-granting system. Such a treaty presupposes an intention on all the contracting parties to hold themselves bound by reciprocal obligations. Strange as it may seem, France is said to have determined upon forcing Germany and England into taking the first steps towards carrying out the intended stipulations. This charge, if true, makes the thing impossible, and any further discussion of it ridiculous. France, more than any other nation, has lately succeeded in successfully competing with Austrian, English, and German sugar in all the world's markets, and such a concession in her favor would practically give her the dominating power in those markets. Only when all the States, without exception, agree upon this one point, of simultaneous adoption of the treaty provisions, can such a treaty go into effect. Thus far there seems to have been "much ado about nothing." When the proposed alterations in the sugar legislation were being projected German manufacturers entered protest, declaring that they would be pressed hard against the wall if the measures proposed were carried out.

POTASH.

So great was the improvement in the sales of muriate of potash that the first months of 1887 show larger sales than the twelve months of 1886. These extraordinary sales are not the outgrowth of speculation, but an enormous increase in consumption. North America has become a regular and large buyer in the German markets. During the first six months of 1887 Madgeburg sold 2,227,935 centners against 1,884,000 centners for the twelve months of 1886.

PLAYING CARDS.*

According to official statistics, in the official year 1886–'87, 58 playing-card manufactories were in existence in Germany as against 61 last year. Of these, 12 were in Prussia, 11 in Bavaria, 18 in Saxony, 7 in Thuringia, 2 each in Würtemberg, Hesse, Mecklenburg, and Oldenburg, and one each in Baden and Brunswick. At the begin-

*Extract from Kuhlow's Trade Review.

ning of the official year 1886–'87, the stocks of untaxed cards in these manufactories amounted to 758,570 packs of 36 or less cards, and 207,487 packs of more than 36 cards. At the end of the year these figures were 715,325 and 248,492, respectively, 3,662,141 packs of the former and 1,204,320 of the latter having been manufactured, and 3,705,386 of the former and 1,163,315 of the latter having been sold. Of the packs sold 3,483,229 and 181,866 of the two different sorts paid duty (against 3,388,796 and 205,744 in 1885–'86), while 198,900 and 976,168 (against 199,714 and 1,055,527 in 1885–'86) were exported to foreign countries. Including importations a grand total of 3,497,406 packs of 36 or less cards and 188,565 packs of more than 36 cards paid duty in the German Empire as against 3,408,151 and 209,664 packs of the respective sorts in 1885–'86.

FREE WOOL.

In the discussion of the question what effect the removal of American duties on wool might exercise upon the German woolen industry, trade journals generally have admitted that the measure was not calculated to benefit German wool manufacturers, and that American manufacturers, with their known energy and enormous manufacturing facilities, would soon make such progress in the manufacture of all kinds of cloth as to emancipate the American wool industry from any foreign competition. The Leipzig Monthly for Textile Industry writes upon the subject:

> It is well known that Germany participates largely in the export of woolen goods to the United States, and it is now asked how far the abolishment of American duty on wool will affect German woolen industry. The question may be answered by saying that the effect is not likely to be a favorable one, because it is thought that the American woolen industry upon the removal of import duty will improve and progress in a measure as to hinder our woolen ware export to that country.

HOUSE INDUSTRIES.

The earliest forms of industry, those of the home, still occupy an important place in the German Empire. Strange as it may seem, the peasant's loom and the good wife's wheel are factors in trade affecting the success and profits of huge factories, run by steam or water-power, employing hundreds of machines and thousands of hands. When the two forms of industry meet in the world's markets and the house-work is beaten, it never revives, *i. e.*, as a mercantile competitor. It is then forced to more modest endeavors, that of satisfying the home demand, or seeks by combination with others to enter the ranks of the small manufacturers who build mills and employ hands. The manufacturer has many advantages of the house-worker, in that he can employ numbers of apprentices, many of whom receive small wages, and yet have a producing capacity, after a short time, little less than an experienced workman, for much—most—of the production is that of machines, and these act now with an almost human, self-regulating intelligence. The new relations between employer and employed render the former indifferent to the latter's fate. Of course there are exceptions to this rule, but these exceptions result from the employers' humanity rather than from anything obligatory in legislation or custom. Home workers have the assistance of members of their own families, often a very numerous corps

of assistants. In 1882 there were 479,534 persons employed at home industries in the German Empire, or 106 to each 10,000 of the population. Prussia had 247,586; Bavaria, 27,430; Würtemberg, 14,501, and the Kingdom of Saxony, 137,873. From these figures it would appear that Saxony has by far the larger proportion of home industries, the number employed at these branches being 457 to each 10,000 of the population. Reuss (elder line) has 315 in 10,000; Berlin, 301; Rhineland, 217; Meiningen, 189; Reuss (younger line), 188; Sachsen Weimar, 179, etc. The branches covered mostly by home industries are stocking making, weaving both woolen and cotton, in Berlin tailors and seamstresses, in the Rhineland silk weavers, in Meiningen statuary, pasteboard, and papier maché, etc.; textile industries leading by a large per cent. The number of home workers employed in silk weaving is 53,286; in cotton weaving, 52,295; in linen, 41,045; stocking making, 40,528, sewers, 49,958; as tailors, 39,928; shoemakers, 18,774, etc. By home workers are meant persons employed at home by and for other people by whom they are paid. The Berlin merchant alone has an annual woolen trade of 60,000,000 marks, yet he spins no yarn, weaves no stuff, for he has no factory, but buys up the products of home industries. This method enables the Berlin merchant to follow the changes of taste and oracles of fashion with sufficient supply and boundless variety from which to choose—a great advantage. Lately, large numbers of small factories have sprung up, producing a much inferior grade of goods and injuring the good name which Berlin dealers once enjoyed. The chief influence of the home trade as an economic factor is the cheapness with which goods can be produced by this method, the cheapness of labor, and the general superiority of such goods over factory wares. Each member of the household contributes his or her share of work, each earning at least the cost of his keeping. The protection of this form of industry, its wider extension or its continuance, will long render successful competition with its products impossible. "Cheap and bad," the cry so often heard against German factory goods, is changed to cheap and good when the home products are being discussed. Yet, deplorable as the results must be, a marked tendency to build huge factories and crush out the home industries must be recorded. The handicraftsman is rapidly disappearing before the tender of machines; shoes, clothing, many articles of household use, once the product of the humble hand worker, are turned out in thousands by machinery. Could the people adjust themselves to the new situation with anything like the rapidity with which the change has come less suffering and complaint would have resulted.

AUTOMATIC MACHINES.

Human intelligence is fast being put into machines. It was not enough that when the woof-thread broke on a loom that the machine stopped; an electric self-operating bell must be added to tell the weaver that the loom was stopped. One man can now tend a dozen machines, which formerly required the attendance of from three to six persons. Inventors, following the scale craze, are now constructing automatic cigar, chocolate, and confectionery wooden men, which bow politely, give you cigars or sweetmeats of certain value upon your depositing the necessary amount of money on a receptacle prepared for the purpose of receiving it. Should one be foolish enough to give too much

or too little money they get nothing in return. When the wooden man has sold out his stock, he smilingly but automatically announces that fact and is loaded up again.

MELBOURNE EXHIBITION.

The German merchants are preparing to participate in the approaching Melbourne exhibition. The rapidly-extending development of the young colonies, and the fact that the commercial connections between Australia and Germany are yet slight, are considered as circumstances which forbid to let slip the opportunity of showing to the Australian public the kind and quality of their wares. German trade in Europe is being more and more diminished by the protective duties introduced by Russia, Italy, France, Switzerland, and other countries, and this is in itself a reason to induce merchants to interest themselves, as largely as possible, in the Melbourne exhibition to secure new markets for their goods. The interest manifested by Germans, both in exhibiting at home and taking part in foreign exhibitions, leads to the conviction that trade is thereby extended. All the year round exhibitions are being opened, and often as possible on the borders of neighboring states.

PAYMENTS ON THE INSTALLMENT PLAN.

Commercial circles are at present very much agitated over what the Germans and English call the hire-purchase system; a system similar to the installment plan of the United States. By this system a seamstress buys a sewing-machine, a family a stove, articles of household furniture, pays several installments, say one-half to one-third the full value; but because of sickness, non-employment, etc., must suspend further payments; in this case the seller takes back his machine, stove, or furniture, and retains the installment already paid. That which in our country may have many advantages, because of the more certain employment and profitable wages, is here the source of a great many evils and a great deal of injustice. Even with us the laborer has long since learned that cash payment has many advantages over any and every system of credit. The system, no matter where employed, offers swindlers a chance to enrich themselves at the expense of the poor and unfortunate. Rubbish is sold at high prices, and taken back, repaired, touched up, and repainted and sold off to some one else at more than its full value, only to return again to its original owner. State interference is being demanded against this new system, so often employed in defrauding the unfortunate poor. What can the state do? The poor man often needs credit; hundreds of persons do buy machines and do succeed in paying for them. There are dealers who carry on the business as fairly as such a business will permit. These persons must have protection also. Not all poor people are honest. Oftentimes goods are used and abused and sent back after the person hiring has gotten out of them all he wanted. The question has its good and bad side. The seller can not be expected to yield his proprietary rights until payment has been made in full. Then again it is only just that persons purchasing have some indemnification in the matter of their installments. If a merchant gives up his proprietary right and payments are suspended he can not seize his machine, for it is now numbered among the necessities of the seamstresses' trade. It has been proposed to draw up contracts

before notaries public, and to have hire establishments get concessions from Government; both plans have their evils, the former frightening away the purchaser, for whose protection it is intended, and adding to his bill an additional expense; the latter plan could hardly be reduced to a good working principle. The best possible preventive of all forms of sharp practice is the carrying out of sharp, swift, exemplary punishments in individual cases of fraud.

TARIFF.

Opinion may have once been divided in regard to the possible effects of screwing up the clamps on foreign imports, but it is so no longer. No doubting Thomas appears. Protection, degenerated into prohibition, has called up such a war of interests in Europe, and that, too, among nations allied closely to each other by the ties of blood and common interests in mutual defense and protection. The German Empire, so say the writers on trade, presidents of commercial chambers, etc., is finding the gates of Italy, France, Austria, Roumania, Russia, all other nations, closed against her. Her many and repeated measures of production have been met with like measures on the part of her neighbors. It is sometimes designated by the obnoxious term retaliation, but it is only reciprocation, or doing as one is done by. Those parts of the Empire which extend like long tongues of land up between the borders of other territory suffer most from the new system. "Modest winnings," "just balanced," a "deficit," are among the most frequent answers to the question, "How did you come out?" The worst feature of the protection cry is its entire selfishness. Only give one branch of business the protection it wants and other branches may sink in the North Sea for all they care. It is not how far will it help national economy, but how much will it increase individuals. Russia's protective policy, say Germans, resulted in a decrease of her imports from 32,000,000 roubles to 23,000,000, and of raw stuffs for industrial purposes from 110,000,000 roubles to 108,000,000. The decline in imports must certainly be consequent upon a decline in consumption, then the dues dropped from 2,120,025 roubles to 41,827. Is Germany to be exempt from the economic laws which affect others? Three times in seven years Germany has increased her tax on foreign grain. In 1879 she began with a 1 mark tax, followed in the next increase by 3, and closed the year 1887 with a tax of 5 marks on the 100 kilograms. The result is that the Germans eat a much dearer bread than any of their neighbors. Austria collects on bread stuffs:

	Wheat.	Rye.	Barley.	Oats.
	Marks.	*Marks.*	*Marks.*	*Marks.*
Austria	3	3	1.50	1.50
France	4.05	1.21	1.21	2.43
Italy	2.43	2.43	.93	1.62
Spain	3.50	2.50	2.50	2.50
Germany	5	5	2.25	4

It is hard to think that protective measures in one country are not to be followed by measures of the same kind on the part of the country against whom protective measures are taken. Even children say, "You kill my dog, I'll kill your cat."

It is interesting to note the results of the new grain tariff on the different classes of agriculturists. The following is taken from the quarterly report of economics, politics, and agriculture:

A technical examination of the profits from the increased tariff on grain presents the following interesting figures. Assuming that from 10 to 50 per cent. of the grain product is sold the producers owning less than—

Number.	Persons.	Per cent. of whole number.	Profits.	Marks per hectare.	Marks per head.
5 hectares	4,043,238	76.62	13.5	2.29	3.33
10 to 20 hectares	554,174	10.6	16.2	3.45	29.25
20 to 50 hectares	372,431	7	30.9	4.60	68.06
50 to 100 hectares	239,887	4.5	63	6.92	262.41
Over 100 hectares	24,991	.41	118.8	11.53	4,753.87

If ever facts spoke louder than words, as if figures ever were eloquent they speak and are eloquent here. Under the most favorable aspects the small proprietor is barely bettered, the middle farming class, whom the law was intended to help on, moderately; but for the large landed proprietors, those owning and working 50 to 100 hectares, the profits have been manifold. The capital value of land has, in the last instance, increased 300 marks a hectare. The tax which has burdened the manufacturing, bread and grain consuming class with a yearly additional burden of 53.5 marks per family has given 76.62 per cent. of the agricultural population an increased yearly income of 3.33 marks, and to 10.6 per cent. of the farming class 29.25 marks. Thus 87.22 per cent. of the agricultural population derive a profit which is in no way comparable with the losses suffered by the inhabitants of towns and cities. The essential difference and gain, if gain it can be called, is found when we come to measure the golden mountain built up for the large land owners—those owning from 50 hectares upward. Those owning upward of 100 have had 24,991; persons are benefited each to an extent equal to an interest-bearing capital of 118,000 marks, or almost 3,000,000,000, and all this to come out of the other 90 per cent. of the population.

There are new taxes proposed upon copper and cotton-seed oil, the latter of which has been demanded by the German sweet-oil manufacturers.

SUBSIDIES.

Recent efforts to increase the list of subsidized steam-ship lines have proven unsuccessful, the necessary proofs to show the necessity of subsidial encouragement not being forthcoming. However important the trade between Germany and East Africa may become, it is certainly not yet important enough for Government to spend some millions in subsidizing special lines of service. Yet there are those who think Government may yet be prevailed upon to make grants looking to a still broader and fuller development of the African trade.

CANALS.

Canals, nothing but canals, is now the order of the day in the German commercial world. The great cheapness of water transportation induces people to consider projects for canals in cases and places where one would scarcely think such a project possible. A canal between Leipzic and Wallwitzhafer is regarded as a thing of the near future, The Rhine and the Danube are to mingle their waters, wedded by a canal. There is the North and Baltic Sea canals. Then the Trave and Elbe are to meet each other by means of this popular method of uniting and utilizing deep streams, as soon as the people interested can make up their minds to expend the necessary amounts of money

to carry the thing into effect. Then there are those who have long talked about uniting Strasburg and both the ceded provinces of Alsace and Lorraine with the Rhine at Ludwigshafen, opposite Mannheim, a point where that magnificent river first becomes navigable to steamers and vessels of deep draught. Right here it may be in place to remark that business suffered tremendous losses this summer and unnumbered inconveniences because of the shallow water in the Rhine and other rivers. During whole weeks navigation on the Rhine was at a stand-still. Besides the lack of water caused by the failure of rains and non-melting of snows in Switzerland the Rhine suffered because of a channel having been dug wherever possible, along straight lines rather than along the stream's natural windings, the result being to precipitate the water into the sea more rapidly than was desirable. Had the digging of such a channel been followed by a compensating narrowing of the banks the depth necessary for navigation might have been retained.

CHINESE BANK.

The German financial world is very busy just now, and has been during the last six months, discussing the necessities and advantages of establishing a Chinese bank. Various plans have been projected, none of which as yet have been adopted, although there is no reason to doubt that a German-Chinese bank is sure to be founded in the very near future. Travelers who have spent many years in China have lectured before boards of trade, colonial clubs, and chambers of commerce, and insisted upon the necessity of such a bank. The establishment of such a bank is to be looked upon as an epoch-making incident in the history of German trade with the Chinese Empire. Even now a large part of German trade with China and the East is carried on by German agents, the goods entering Chinese ports in German ships. A German bank will get all the trade and save all the fees which German merchants and agents must now pay to French and English banks in China. Germany sent 12,473,000 marks' worth of goods to China in 1886. These figures do not tell the whole story, since large quantities of German goods found their way to the Flowery Kingdom in English ships sailing from English ports. This sum, 12,000,000, shows an increase of 3,000,000 over the returns for 1883. For some reason not given, the amount of German goods sent to China in 1885 was 5,000,000 less than 1886. Chinese returns give the import into the Empire for 1886 at 87,479,323 taels, or 507,380,073 marks, or 820,695 taels less than for the preceding year. The value of the export was 77,206,568 taels, an increase of 12,200,857 taels over 1885.

China's chief articles of import are textile fabrics, petroleum, and opium. Of these articles only the former are of interest to German merchants who send large quantities both of cotton and woolen goods. Germany increased her export of iron and chemicals to China very considerably during the year 1886. This condition of Germany's trade with China calls urgently for the founding of a Chinese bank. In a short time the demand will be imperative. Had such an institution been founded long ago, say travelers and merchants, German interests among the Celestials had been better cared for and more successfully fostered and extended than they have been. Following the old proverb, "that it is never too late to mend," the merchants and business men of Germany are now making the erection of a Chinese bank a settled thing.

SCHOOLS.

Germany enjoys the reputation of being one of the best, if not the best educated nation in the world. Charge them as we please with being theoretical, we find them in all the world's business centers eminently practical. The important part played by a knowledge of a language is nowhere better understood or better provided for than in the German Empire. English, the so-called language of commerce; French, the language of literature, are the heritage of every person enjoying an education in German schools. Besides these languages, those of other countries, Spanish, Italian, Russian, Slav, etc., are and have been studied. Since the opening up of Eastern countries will require commercial travelers to drum up trade, a knowledge of Eastern languages will be necessary. To fill this need, schools have recently been opened in Berlin in connection with the diplomatic school, at which clerks and interpreters are trained for the consular and diplomatic service. At these schools business men's sons are admitted and trained in a course embracing Oriental languages—Chinese, Japanese, Hindustani, Persian, Turkish, Suaheli. Lectures are to be given in the religion, manners, and customs, geography, statistics, and modern history of the nations which speak them.

The course will embrace, for Chinese, six to eight terms; Japanese, six; four each for Hindustani, Arabic, Persian, and Turkish, and two for Suaheli. Each class is to be limited to twelve scholars. A certificate of degree of proficiency is to be given at graduation.

Besides the attention given by the schools to the matter of languages there is still another matter of great interest, and that is the part played by Germany's industrial and art industrial schools. The benefits to be derived from an early and careful training in habits of regularity, perseverance, and observation are incalculable. It is universally conceded that the things learned before a person is twenty are the things which impress themselves deepest and are never forgotten. The rapid strides made and being made by German products had never been possible without her industrial and industrial art schools. Go where you will, the answer is always the same. They have become an indispensable part of the nation's system of education, more deeply rooted in popular favor than the folks school (Volks Schule).

THE FOLKS SCHOOL.

Strange as it may seem, among a people who spend so much money on education, the folks school, the most necessary branch of the educational system, is not only very inferior, but is not free. Parents have to pay 5 to 10 marks a year for each child, which, set against the wages earned, would be nearly the same as $5 to $10 in the United States. Then, again, the teachers' salaries are miserably small, ranging from 500 to 1,500 marks.

POST AND TELEGRAPH.

The latest postal and telegraphic returns, those for the year 1886, show 16,592 offices against 15,385 for the year 1885. The army of clerks, officials, etc., increased 4,000, being now 35,459. There are to-day 4,292 postillions. The post requires daily the service of 5,267

railroad carriages. Efforts have been constantly made since 1883 to increase the system of country delivery by mounted or wagon delivery. There are now 1,491 persons engaged in this branch against 687 in 1883. The mounted or wagon delivery covered 10,070,180 kilometers, while the postmen on foot covered only 9,009,215. The number of letters, packages, etc., sent by post for 1886 was 1,921,000,000 against 1,811,000,000 for the previous year—774,000,000 letters, 246,000,000 postal cards, 422,000,000 printed matter, 19,000,000 samples of goods, 59,000,000 money-orders. The number of letters increased 5 per cent. and the postal cards 7 per cent. over 1885. Four hundred and ninety-nine million newspapers, 5 per cent. more than in 1885, were delivered by the post. In 1886 the post delivered 15,838,000,000 marks on postal orders, etc., against 15,650,000,000 for 1885, an increase of about 1 per cent. The cash money-orders for 1886 amounted to 9,475,000,000, against 9,626,000,000 for the previous year. This was due to an increased use of bank-checks. The number of packages, no value given, was 83,318,680, against 82,427,200 in 1885. The weight of these packages amounted to 342,034,270 kilograms, against 342,121,910 in 1885. The telegraph line increased in length from 71,617 kilometers in 1885 to 74,690 kilometers in 1886. The length of wires increased from 252,453 kilometers to 261,350. The year 1885 saw 8,207 telegraph offices; 1886 saw 8,841. The number of telegraph offices having telephone service for public use increased from 3,170 to 3,720. The number of telegraphic messages was for 1886, 18,659,706—7.25 per cent. more than for the year 1885. The number of persons who used the state telephone service increased from 12,710 in 1885 to 17,243 in 1886; 65,000,000 conversations were held against 39,000,000 for 1885. The entire post and telegraph income reached 179,853,964 marks against 172,242,249 for 1885. The surplus increased, after payment of all expenses, outlays, etc., from 21,502,386 for 1885 to 23,545,844 marks.

POST-OFFICE SAVINGS-BANKS.

An effort has been made to engraft the postal savings-bank system onto the German postal service, but has not met with success. Nevertheless its promoters, in no wise daunted, are fresh in the work again, hopeful as ever, believing that reforms grow. The necessity for such institutions, in a country whose smallest villages have sparkassen or savings banks, is not apparent; still it has some advantageous features and must come.

GERMAN TRADE IN CHINA, SOUTH AMERICA, AND SPAIN.

German merchants, though but a short time in the field, are succeeding in making a very creditable showing in China against French and English rivals, who have long enjoyed the eastern, and especially Chinese, trade. German commercial travelers are always to be seen there with a complete collection of patterns of the most tasteful and popular articles, offering to deliver goods, freight and tax free, into the warehouse and on the easiest terms of payment. German manufacturers of woolen goods have won the upper hand for their ware in Spain, the Spanish colonies, and Brazil, England alone maintaining her hold on the cotton market. Sixty per cent. of the woolen imports of Chili come from Germany. In Rio Grande del Sul five times as many German goods are sold as English. The success of the Germans in these countries is largely due to the presence of a large number of German colonists.

TENDENCIES OF MODERN TRADE AND INDUSTRY.

The process of supplanting hand labor with machine work has, during the last few years, gradually and constantly progressed even in Germany, where handicraft men are forming, and have always formed, so substantial and valuable a part of the population. Factories of all kinds, clothing and shoe manufactories in particular, which were scarcely known not longer than ten years ago, are now in operation by the hundreds and daily increasing, will have the effect of crowding out handicraft pursuits and of turning handicraft men into factory hands or day laborers.

Retail traders are fast becoming threatened by a similar fate. With the same inevitable certainty with which the factory rises upon the ground upon which the workshop formerly stood, will the retail dealer be quietly pushed out of existence by the giant bazar.

CONCLUSION.

The task of the German industries is a formidable one. It compels them to expand, owing to the inevitable necessity to exchange the products of their surplus labor against the necessaries of life produced by other countries. The cause of this necessity lies in the fact that the natural resources of the land are not sufficient to support the present dense, much less its rapidly increasing, population.

German industries, therefore, have, so to say, no choice in the matter; they must move forward; and the experience of the last year has demonstrated that the nation has the energy, good will, and intelligence to recognize the inevitable, and to put in their best efforts to meet the exigencies of their situation.

JACOB MUELLER,
Consul General.

UNITED STATES CONSULATE GENERAL,
Frankfort-on-the-Main, February 20, 1888.

Declared exports to the United States from the district of the United States consulate-general at Frankfort-on-the-Main and the consulates subordinate thereto during the year ended December 31, 1887.

[Values given in United States gold currency.]

Articles.	Aix-la Chapelle.	Barmen.	Cologne.	Crefeld.	Dusseldorf.
Braids, bindings, trimmings, etc	.....	$1,298,519.72	.....	.....	$15,953.44
Books, stationery, photographs, and paper ware	$64,720.96	.....	$14,848.22	$59,632.08	.....
Buttons, button stuffs, etc	1,351.70	419,845.46	.....	2,112.61	24,771.96
Caps and cartridges	.....	.....	.....	.....	21,702.20
China, glass, porcelain, stone and earthen ware	93,517.01	.....	57,194.34	.....	126,498.94
Cloth	1,188,789.25	.....	.....	.....	15,127.69
Cologne water	.....	.....	20,706.92	.....	.....
Dyes, drugs, chemicals, etc	38,996.57	237,448.53	299,716.22	16,316.41	105,117.58
Fancy goods and toys	.....	295,290.02	13,484.70	.....	.....
Gloves	945,231.51	.....	.....	.....	.....
Hat-bands and ribbons	.....	889,700.38	.....	.....	.....
Hops	.....	.....	14,318.35	.....	.....
Iron-ware, steel, cutlery, etc	1,841.77	1,152,187.36	1,437,072.98	.....	3,808,301.80
Lead and spelter	21,159.91	.....	.....	.....	.....
Leather, hides, and skins	.....	.....	142,050.65	.....	.....
Linen, woolen, and cotton goods	.....	1,060,751.33	44,413.75	160,300.19	293,635.34
Machinery	23,441.11	61,979.60	9,994.36	2,954.20	35,965.20

Declared exports to the United States from the district of the United States consulate-general at Frankfort-on-the-Main, etc.—Continued.

Articles.	Aix-la-Chapelle.	Barmen.	Cologne.	Crefeld.	Dusseldorf.
Mineral water	$5,065.51		$366,079.04		$4,455.55
Oil and glass paintings and chromos				$2,493.94	30,112.18
Prunes, dried fruits, nuts, land produce, etc		$29,915.80	8,756.20		
Pins and needles	48,068.08				
Silk, silk goods, velvets, ribbons, braids, etc		339,147.75	492,365.12	5,703,983.24	185,423.88
Smokers' articles, snuff, cigars, and tobacco			7,131.38		
Soaps and perfumery			14,483.43		
Sundries	8,697.83	58,537.16	39,947.89	30,005.02	21,132.20
Steel (manufactured) and bessemer	736,889.13				
Wine, brandy, beer, and liquor	819.98		142,631.07	21,728.36	3,227.76
Total	2,477,883.32	5,772,623.71	3,125,196.62	5,989,476.05	4,685,755.82
Total for preceding year	1,897,929.20	4,484,399.17	2,604,010.56	4,508,829.18	2,981,811.84
Increase	579,954.06	1,288,224.54	521,186.06	1,480,646.87	1,703,943.98

Articles.	Elberfeld.	Frankfort.	Kehl.	Mannheim.	Mayence.
Braids, bindings, trimmings, etc	$54,765.03				
Brushes and hair pencils		$2,666.64		$54.74	
Books, stationery, photographs, and paper ware		145,373.39	$84,905.10	11,423.03	$1,059.60
Buttons, button stuffs, etc	51,607.14	60,490.95			
Clay		73,650.88			
China, glass, porcelain, stone and earthen ware		6,815.04	71,866.25	2,131.76	
Cotton dress goods, velvets, and furnishings				5,292.88	
Cloth		37,556.30			
Downs and feathers		27,883.68		680.20	
Dyes, drugs, chemicals, etc	296,540.07	926,780.80	110,519.65	399,647.46	401,503.06
Fancy goods and toys		60,275.76			
Glass-plate, window and mirror glass		29,029.65		31,071.53	
Hatters' fur		152,175.13			
Hat-bands and ribbons	107,733.16				
Hair, prepared and raw		49,168.62	21,511.85		4,325.80
Hares' hair		250,756.69			
Hops		80,554.38	11,504.30		99,017.60
Instruments		24,269.75			
Iron-ware, steel, cutlery, etc	809,134.60	17,323.13	1,846.45	65,880.84	
Jewelry and precious stones		20,797.20	243.90	5,142.94	219,713.44
Leather, hides, and skins		371,131.60	97,759.90	379,358.67	138,687.83
Leather goods		59,862.01			
Linen, woolen, and cotton goods	352,723.11	44,977.23	338,012.30	12,297.70	1,111.66
Machinery		10,936.65	2,290.30		
Mineral water		86,442.29		71.64	
Music, musical strings, and instruments		4,431.89	4,067.60	1,541.05	1,906.93
Optical goods		13,556.23			
Oil and glass paintings and chromos		6,649.23			2,268.14
Platina wire and platinum		61,850.45			
Prunes, dried fruits, nuts, land produce, etc		225,534.54	2,914.45	90,421.57	30,789.25
Seeds, plants, etc		30,819.33			780.99
Silk, silk goods, velvets, ribbons, braids, etc	758,119.65	2,320.34	249,497.85	2,595.62	
Smokers' articles, snuff, cigars, and tobacco		15,005.46	7,388.10	6,118.26	9,168.66
Soaps and perfumery		11,468.75			
Sundries	18,970.04	24,996.48	25,413.60	85,441.26	38,539.96
Steel (manufactured) and bessemer		4,994.67	317,883.10		
Wine, brandy, beer, and liquor		115,801.02	4,054.85	219,056.14	743,162.17
Watches, clocks, and watchmen's detectors			8,063.15	307.50	
Total	2,449,592.80	3,056,396.16	1,359,727.70	1,318,534.79	1,692,035.05
Total for preceding year	2,291,233.12	3,165,136.23	1,104,069.15	1,501,050.77	1,734,954.45
Increase	158,359.68		255,658.55		
Decrease		108,740.07		182,515.98	38,919.40

Declared exports to the United States from the district of the United States consulate-general at Frankfort-on-the-Main, etc.—Continued.

Articles.	Munich.	Nuremberg.	Sonneberg.	Stuttgart.	Total.
Braids, bindings, trimmings, etc					$1,358,588.19
Baskets and basket ware		$238,917.37	$16,220.07		255,137.44
Brushes and hair pencils		34,748.68			37,470.26
Bronze powder and leaf metal	$12,075.90	647,491.96			659,567.86
Books, stationery, photographs, and paper ware	39,641.67		42 207.43	$24,875.71	488,687.19
Buttons, button stuffs, etc					560,179.82
Caps and cartridges					21,702.20
Clay					73,650.88
China, glass, porcelain, stone, and earthen ware	11,453.87	52,363.28	865,111.62		1,286,952.06
Cotton dress goods, velvets, and furnishings					5,292.88
Corsets				581,799.71	581,799.71
Cloth					1,241,483.24
Cologne water					20,708.92
Downs and feathers					28,513.88
Decalcomania		52,971.45			52,971.45
Dyes, drugs, chemicals, etc	15,449.24	79,689.88	94,696.61	878,172.46	3,899,846.51
Fancy goods and toys		401,757.69	1,017,363.58	3,886.43	1,792,058.78
Fancy paper		121,362.77			121,362.77
Glass plate, window and mirror glass		1,881,362.16			1,891,463.34
Gold, silver, and metal paper	60,100.18				60,100.18
Gas-burners, lava gas-tips, brass lamps		25,467.10			25,467.10
Gloves	74,114.34		13,766.46		333,112.31
Hatters' fur					152,175.18
Hat-bands and ribbons					937,433.54
Hair, prepared and raw					75,006.27
Hares' hair					250,756.69
Hops		991,339.07			1,196,833.70
Instruments	4,403.51	34,851.13		23,541.42	86,065.81
Iron-ware, steel, cutlery, etc			23,356.64		7,311,945.57
Jewelry and precious stones				17,051.80	203,948.78
Lead and spelter					21,152.91
Leather, hides, and skins				3,028.61	1,132,017.26
Leather goods					59 863.01
Leonic ware		56,416.74			56,416.74
Linen, woolen, and cotton goods	13,137.64	17,408.01	468,491.09	626,164.34	3,433,498.09
Lithographic stones and materials	10,754.81	45,498.96			56,253.77
Machinery	4,659.44				151,530.86
Mineral water			2,288.52		464,397.55
Music, musical strings, and instruments		27,294.76	2,066.43	81,148.09	122,426.75
Optical goods		18,785.29			32,341.52
Oil and glass paintings and chromos	254,812.58				296,336.07
Platina wire and platinum					61,850.45
Prunes, dried fruits, nuts, land produce, etc	52,118.33			253,166.75	603,616.89
Pins and needles					48,068.08
Seeds, plants, etc			58,158.95		89,759.27
Slates and slate pencils, lead pencils		151,299.24	40,649.57		191,948.81
Silk, silk goods, velvets, ribbons, braids, etc					7,733,406.45
Smokers' articles, snuff, cigars, and tobacco			12,598.06		57,894.94
Soaps and perfumery					25,952.18
Statuary and sculpture	40,910.65				40,910.65
Sundries	94,497.84	33,301.73	12,698.73	69,042.06	551,231.84
Steel (manufactured) and bessemer	11,506.44				1,071,270.34
Wine, brandy, beer, and liquor	6,234.74	40,357.51	11,941.59	4,727.06	1,313,782.27
Watches, clocks, and watchmen's detectors				2,748.06	11,118.73
Total	705,866.13	4,902,634.92	2,681,572.36	2,508,392.01	42,785,689.44
Total for preceding year	546,142.09	5,495,602.16	2,631,482.85	1,698,866.40	36,635,517.23
Increase	159,726.04		50,089.51	809,525.61	6,150,172.21
Decrease		592,967.24			

Statement of strength of German army for 1888-'89.

Officers	19,294
Soldiers	468,409
The ranks of the 468,409 soldiers consist of the following:	
Subordinate officers	55,503
Paymaster aspirants	848
Musicians:	
Subordinate officers	5,516
Privates	13,758
Vice-corporals and privates	378,249
Hospital assistants	3,705
In addition to the above are the following:	
Military physicians	1,770
Paymasters, riding-master, and military music inspectors	841
Veterinary surgeons	516
Musket-makers and masters of arm	808
Saddlers	93
Horses for service	84,091

ECONOMIC INTERESTS OF GERMANY.

REPORT OF COMMERCIAL AGENT SMITH.

I have the honor to make to the Department the following report respecting the general industrial and commercial situation in Germany during the year 1887, based upon such points as have come prominently before me in the past. The report, however, while aiming to present a large variety of items, does not profess to notice everything. For any consul to make a report which shall cover the whole German field in all the departments of life and activity, is out of the question. It is at best only a brief and superficial report which any one can submit. The subject is too large, diversified, and far more complicated.

GENERAL SITUATION.

The year 1887 was a blue one for business in Germany, taken all in all. In the early part of it trade was almost completely paralyzed by the fear of an impending European war, and since then has shown no great activity. The anxiety depicted on the faces of men during the first months of the year has given place to an expression of calmness, but the political situation in Europe remains an uncertain one, and business has been and continues responsive to every whisper of hostile movement. Distrust prevails, and the feeling seems to be quite general that a European conflict of some kind may break out at any moment. The political heavens are clear, however, compared to what they were early in 1887.

All Continental Europe seems to be a grand powder magazine, which a stray spark can ignite at any time, and presents a picture in marked contrast to the placid aspect of the United States. Happy indeed is our situation, and well is it for us that a wide ocean rolls between us and the armed hosts of Europe. Pursuing fixedly our policy of non-intervention in European affairs and complete separation from their entanglements, we escape their vexing problems, while we nevertheless exercise, by the force of moral example, a great influence, silent, but notwithstanding mighty. Our diminutive

Army and insignificant Navy, coupled with our prosperity in peaceful pursuits, are an eloquent testimony to the value of free institutions under favorable conditions, and the force of this example exerts a powerful effect on all civilized mankind, which can not be measured on account of the silence with which it operates. While we look with deep regret upon the armed state of Europe, we can afford to regard with philosophical tranquility the antagonisms which beset its nations.

The relations between Germany and France have never been so strained and unfortunate, it may be said, at any time since the great war of 1870–'71 as during the past year. In the early part of the year the two nations appeared to be on the eve of a struggle with each other, which a feather's weight would bring about.

Germany regards the bitter feelings in France engendered by the last war as not one whit abated with the lapse of time, but, on the contrary, as encouraged and intensified by the incessant nurture by the press and politicians of the country of the revenge idea. Germany does not dread, but is averse to, a war with France. "If the French wait for the Germans to attack there is an assurance of peace forever," said Prince Bismarck in the debates in the Reichstag last winter on the probability of war with the effervescent Republic; and that is the sentiment of the German nation, so far as I can learn it.

There is no guaranty for peace in Europe so long as the old feud between the Celt and Teuton lasts. This bad feeling has a very prejudicial effect upon commercial intercourse between the two countries, to the injury of both; and the apprehension that war may break out at any moment makes the business men of the two countries cautious in their dealings with each other. The German is fully convinced that the very moment France feels strong enough to stand another bout with her victorious rival the war-cry will be sounded, and he may be said to sleep with his hand upon his sword and his arm upon his gun, in expectation of this onslaught.

The relations between Russia and the German Empire are also not very cordial. A hug from the Russian bear seems to be as much apprehended as a dig from the Gallic cock. High protective duties on the part of Russia shut out the products of German skill and industry from its midst, and expulsions of German residents in the Empire, and restrictions on their business undertakings and possession of property there, embitter the German people against Russia, added to which is the threatening attitude materially of that country towards Germany. In some respects these duties are tantamount to prohibition of importation. The German iron industry has suffered severely from its effects. A tendency to combination between France and Russia against Germany also makes a feeling in Germany hostile to Russia.

The policy of Germany is declared to be the pure conservation of energy for the defense of national rights and the maintenance of peace in Europe. A course of aggression on neighboring states is affirmed to be totally contrary to the German character. In the language of the address from the Throne to the Reichstag on coming together again in November, 1887—

> The foreign policy of His Majesty, the Emperor, has been the successful endeavor to keep the peace of Europe, whose maintenance is his task, by a cultivation of friendly relations with all powers, and to strengthen the same by treaties and alliances, having the object of warding off dangers of war and unjust encroachments by common action. The German Empire has no aggressive tendency, and no ends to be satisfied by a victorious war. The unchristian disposition to fall upon neigh-

boring nations is foreign to the German character and its constitution as well as the principal on which its army is based is opposed to the disturbance of the peace of our neighbors by arbitrary attacks. But for the repulsion of them and the defense of our independence we possess the strength, and, with God's help, mean to become so strong that we can regard every danger with composure.

But while war with force of arms does not prevail, another species of conflict does, waged on a commercial field, and that is the struggle of industrial and commercial leadership through protective tariffs. In their movements the nations of Europe appear not to be any more so much actuated by desire for territorial aggrandizement and mere love of military glory, Russia excepted, as by the considerations of commerce and national sovereignty, and nothing so deters from hostile demonstrations against one another as pecuniary considerations. The old lust of dominion no doubt remains in a large degree, but it is held in check by the struggles of the peoples for national autonomy; and woe be to that nation which is made up of diversities of race and language. Its fate is as sure as though written on its palace walls, like Babylon of old, for disintegration is expressed all over it. The record of our age is the record of centralization of national unification and self-government.

I see no good reason why the Frenchman and the German should eye each other with such deadly hatred. The true interests of France and Germany are not identical, but they are not inimical.

There is plenty of room in Europe for a great France, on a peaceful and commercial basis, as well as for a grand Germany. It is unwise for the French to sulk over the logic of events and harbor the idea of a revenge in the near future. Germany is now a grand empire, within appropriate boundaries, and composed, for the most part, of people allied together by a common language and a common descent, and while it may and doubtless will within itself go through internal convulsions, its destiny is expansion, until every foot of contiguous soil held by a Teutonic inhabitant shall be embraced within its natural limits. Although an empire in the confederacy of its states it is the nearest approach in Europe to the American system of State sovereignty incorporated in national. It is now the great intellectual and conservative force in European politics, and the best representative of our idea of diversity in unity. For the French to attack the Germans would be to challenge manifest destiny, and invite a defeat existing in the nature of things. The map of Europe needs much reconstruction, and will receive it in time, but it will arise through ethnical considerations, and not from unnatural causes. While I admire the German nation, I have an affectionate regard for the French Republic, and wish to see both dwell side by side in amity.

The Germans are not only making great strides in political directions, but in commercial also, and were it not for the protective tariffs rising up in various parts of Europe, shutting out their productions and limiting their markets, the balance of trade would probably be now much in their favor. The balance of trade was largely against Germany up to 1882, but since then it has inclined to favor the Empire. In 1872 the imports of Germany amounted to $824,432,000 and the exports to $593,096,000, while in 1886 this relation was $700,902,000 to $726,225,000, inclusive of precious metals, showing a decided reversal of the balance of trade against the Empire. It must be also borne in mind that prices have been declining for some years. At the old rates the figures would be greater. As it is they are becoming formidable competitors to all their rivals, and in distant parts seem to be

dealing the old mistress of the seas, England, heavy blows. Not only the English press, but the reports of our consuls bear abundant testimony to this fact. Her exports to France are now greater than her imports from that country, while formerly the contrary was the case, and she is proving a formidable rival to France in the markets of other countries.

Cramped at home in a thickly populated country, where the struggle for existence is severe, and where the rewards of labor are comparatively slight, the Germans find it necessary to look abroad for a field of action; and the Fatherland is constantly sending forth swarms of its energetic and thrifty children to seek a home and a fortune in a foreign land, while its manufacturers at home strive by low prices and close profits to win for themselves those lands for markets to which their countrymen journey. And the Government is seeking to build up for the country a commercial marine which shall be worthy of the first military nation in Europe. They do not hesitate to exile themselves to remote and little known countries. They are with their goods wherever there is a demand for them, and where there is no demand they do their best to create one. There is, however, to the American eye a lack of grace and elegance about many of their productions. Their success in foreign lands they owe to their painstaking endeavors to ascertain and please the tastes of the peoples of those countries and to accommodate buyers with long credits. They watch closely and attend to the little things of business, and cut profits down to the lowest possible margin.

Another reason also why Germany is able to so successfully compete with the nations of the world is the cheapness of labor in the Empire and cheapness of articles, such as coal, iron, and wood, that are of vital importance to manufacture.. Technical schools, too, are thought to play an important part. Of these there are understood to be about 250 in the Empire. The textile and metallurgical industries especially are well taught in these schools. That such training of the labor of any country must be of great benefit to its industries must be apparent to every thoughtful mind. And while on this point it may not be out of place to remark that the disposition shown in the United States during the last few years to introduce into the schools of the country the training of the hand as well as of the eye, if generally and intelligently carried out, can not fail to be of incalculable benefit to the country and produce a nation of skilled workmen whose productions will raise our country to a height of industrial excellence unsurpassed by any country and challenge the admiration of the world. The classic purity of art will yet reassert itself in the United States, and the cunning workmanship of the olden time live anew in the Republic of the West; and what is now but questioned prophecy will one day be recorded fact. The American people show by their delicate sensibilities, their taste in dress, and their household decorations that there is a view of art latent in them which will one day manifest itself in a degree surprising to mankind. Art loves a free soil. The history of Greece, of the Italian republics, and of the Netherlands is a witness to this fact. Invention is democratic in its character, and in its train must follow the elegance of art. The first century of our Republic has been the triumph of labor over the wilderness; the second will be the influence of art upon the product of this labor.

The Germans in the last dozen years have been improving on an extensive scale their old machinery, or creating new. They have

watched closely mechanical progress in the United States and profited largely by it. Greedily have they picked up and put to good use American inventions; but they are still far behindhand in many respects.

The struggle for business supremacy in Germany is very keen, but I do not think that the competition among business men is as great here as in the United States. There is a great deal of overproduction going on and much lament is made over it, but it goes on nevertheless. Money is cheap, and the large establishments are enabled by it to go on producing and extending, to the dismay and hurt of the small concerns.

All prices are, as a general thing, low. The general state of the world's market and the improved machinery used have sent down the price of nearly all articles, accompanied by a fall in incomes from investments, which makes the rich man of yesterday careful in his expenditures of to-day. The farmer is harrassed by low prices for his products, and by the fear of being overwhelmed by the cheap productions of the extensive fields of America and India. Danger of war, overproduction, a sinkage of the rate of interest on invested capital, competition from abroad in farm products, all conspire to lessen the incomes and diminish the purchasing power of the people.

Germany has naturally been affected during the last few years by the general trade depression prevailing throughout the civilized world, but despite that has been in a state of constant growth ever since the events of 1870–'71 called into being the German Empire. Not only has the political and industrial life of the country been acted upon in a marked degree, but even the ordinary life of the people has been influenced by the changed conditions which have occurred, and as a consequence of it a tendency is everywhere observed to growth and expansion.

The great improvements in machinery which have taken place and increased employment of it, while very advantageous to the people at large, has had a tendeney to force down the price of labor. This increased employment of machinery, combined with the greater facility with which the producer and his customer can now deal with each other, has led to a fall of prices, and manufacturers have endeavored to repair the decline in prices by increased sales, and in this way raised up a dangerous competition among themselves, which hardly permitted the costs of production to be covered. Rivals in the same branch of industry have therefore been compelled by force of circumstances, and in self-defense, to make overtures to one another and agree to conventions limiting the amount of production and fixing a standard of prices.

The general industrial situation at the beginning of the year 1887 the chamber of commerce here considers the most unfavorable looking since the great depression throughout the world began in 1873.

What effect the protective tariff of the country inaugurated in recent years has upon the general business situation I can not undertake to say. Opinions vary in the Empire with regard to it, and a very plausible argument can be made on either side of the question. The country, however, seems to be in favor of the experiment, otherwise it would not have adherents enough in the Reichstag to carry it forward; but there is strong opposition to it in certain quarters. Carried to an extreme length, though, among all the nations of continental Europe, it can not fail to end in a practical non-intercourse commercially.

Germany is apparently profiting at present from her protective policy, but is very dependent upon foreign markets for the taking of her surplus productions, and it is of vital interest to the Government, in view of the great demands made by the army upon the resources of the country, to keep up the ability of the people to meet the consequent taxation, by stimulating industry and fostering commercial interests. The Government must therefore be satisfied that the present tariff is beneficial in its operation, otherwise would not persist in maintaining it.

Germany's export exhibit certainly shows constantly an improving traffic, but this increasing exportation is due, I am inclined to think, more to an ability to undersell foreigners in cheap goods, through low wages and small profits, than to superiority of manufacture in fine lines of goods. The fact is that the Germans are producing a certain class of goods with very cheap labor, and disposing of them on close profits, making of them very dangerous competitors.

Now, mark me, I do not say that what Germany is producing is shoddy in character, nor do I say that no fine goods are made; I am only declaring that it is largely in the cheap lines of goods that the exports of Germany are understood to consist.

Dependent, as she must be, upon foreign markets, and finding the markets in the states of continental Europe more and more closed to her by high customs duties, Germany has felt obliged to look far abroad for markets for herself and seek by clever dealing to obtain the markets of the new states rising up prominently among the nations of the world, and establish with Asia Minor, Persia, China, Japan, Australia, South America, and Africa commercial relations of a profitable character.

With a view to encouraging the study of Oriental languages by its people for commercial purposes, a seminary has been established by the Imperial Government at Berlin, where the living Oriental languages are to be taught. This is another evidence of the disposition of the Germans to acquire a world-wide commerce. The institution is presided over by Professor Sachau, who is understood to be the greatest Orientalist in Germany. The object of the university is not so much to achieve academic results as to impart to young men who desire to become merchants, consular officers, missionaries, doctors, and the like, in distant countries, a practical knowledge of the languages of those countries, so that when they reach these countries they will feel somewhat at home in them. It is proposed to give instruction in Chinese, Japanese, Persian, Hindoostan, Arabic and other tongues. So far as possible, natives of Oriental countries are to be employed as instructors, aided by German professors. The seminary was formally opened last October.

The United States, too, in certain respects, is a good customer for what Germany has to sell. The exports made thither are on the increase all the time, notwithstanding the very high duties prevailing there, and the commercial barometer of our Republic is constantly watched with deep interest by the business men here. The United States is one of their valued customers, and a period of panic or commercial depression in our country means the loss to Germany of large orders.

The declared exports to the United States from Germany amounted during the year ended September 30, 1887, to $83,794,630, or to $7,206,585 more than in the preceding year. The total exports from

Germany in 1886 being put at $726,000,000 about one-tenth of Germany's exportation goes to the United States.

The principal articles exported by Germany to all countries are the raw stuffs and fabrics of the textile and felt industries, principally fabrics; wearing apparel; food, raw and prepared, principally the latter; raw and manufactured chemical and pharmaceutical productions, consisting mostly of manufactured articles; raw stuffs and manufactures of the leather, oil-cloth, and fur industries, mainly manufactured; metals and manufactures therefrom; machines, instruments, and apparatus; cattle; and so on. The sum of the exports to all countries in 1879, the year of the departure in protective directions, was $671,160,000, since which time it has been increasing in volume, with the exception of quite a retrogression in 1885.

Bremen and Hamburg are not yet included in the German customs union, and they appear as foreign traders with Germany in statistics. Soon, however, they do become part of this union, and a further step in the direction of national solidification will thereby be accomplished, for it is an anomaly for a great country like Germany to have its two principal sea-port towns independent of the general Government in customs matters, as would be the case with us were New York and Philadelphia free ports of entry, while all the rest of the country formed a customs union under a protective tariff.

The total exports and imports of the German Empire since 1872, exclusive of those of Bremen and Hamburg, have been as follows, as declared by the Imperial Government:

Year.	Imports.	Exported.
1872	824,432,000	593,096,000
1873	1,012,452,000	586,670,000
1874	873,460,000	585,242,000
1875	850,374,000	609,280,000
1876	930,818,000	619,752,000
1877	921,536,000	672,826,000
1878	884,170,000	693,770,000
1879	925,344,000	671,160,000
1880	680,680,000	701,148,000
1881	711,620,000	723,520,000
1882	753,032,000	772,072,000
1883	788,020,000	793,730,000
1884	781,830,000	778,022,000
1885	711,382,000	693,770,000
1886	700,902,000	726,225,000

This exhibit shows that Germany has been increasing her exports and decreasing her imports since she entered upon her protective ways, but whether this change is due to her protective policy, or has come about in spite of it and is due to the national union formed in 1871, I must leave to the political economist to puzzle out.

The enemies of the present tariff policy of the Empire denounce it as suicidal. It has raised up for the country, they say, commercial enemies in Russia, Italy, Switzerland, France, Greece, Roumania, and Austria, who are responding to every increase in German duties by raising their own custom duties to the injury of Germany. The Empire must have commercial relations with the world at large to live, they say, and these relations are being jeopardized and destroyed by unwise tinkering at the tariff of the Empire. The factories of the Empire are producing much more than the home market can receive and profitably dispose of, and if barriers of exclusion are erected on the German side it is to be expected that similar defenses will be

built up by the nations affected, and the gain realized be more than counterbalanced by the loss experienced.

Already the Empire is a great loser in its trade with Russia, which, it seems, has been largely destroyed by a very high protective-tariff policy inaugurated by Russia since the Germans entered on their protective system. With other countries the outlook is also unfavorable.

Austria-Hungary, with which the Germans should drive an active trade by reason of their geographical position, has in recent years carried on a customs war with the German Empire, and by high duties either kept out German goods entirely or forced their manufacturers to dispose of them, in order to hold the market, at very low prices.

Into the warring list almost all the countries of Europe are entering, and it is impossible to predict where they will stop in their struggles for commercial supremacy.

The receptivity of Germany for foreign securities is said to have been thus far astonishingly great. The rate of interest in the country is very low, and its people seek by investments in profitable foreign paper and enterprises to make their incomes larger than they would be from capital invested at home.

Large quantities of Russian securities have been, and I believe still are, held by the Germans.

During the summer an effort was made by a certain class of influential newspapers to damage Russian paper in the eyes of the public, and cause an unloading of it on the market, which for a time met with much success, but after awhile abated.

The Germans ask themselves why they should furnish Russia, by taking its securities, with the means to build railroads, with which to compete with the industries of the Fatherland, and to mass troops on the German frontier for warlike purposes, and, moreover, to cripple Germany financially, should it ever actually come to blows between the two giants, by repudiating all its obligations to German subjects. Certain patriots think they see in it a great danger to their country, and seek to dissuade and alarm their countrymen from investing their earnings and accumulated capital in bonds of a country with which they are liable to be at any time at war.

The rate of discount of the German bank averaged 3.41 per cent. during 1887. In 1886 it was 3.27 per cent., in 1885, 4.12 per cent., and for 1884 the rate was 4 per cent.

WORKINGMEN.

The wages of the working people remain about the same; in fact, they are so low that they could not well be much lower. As it is, the laboring population of the Empire have a constant battle to wage against want and misery. Hardly any man of family is able to earn enough to support his family in the simplest manner without being aided by his wife in some way. They eat the plainest food and dwell in forbidding-looking, overcrowded tenements, and oftentimes a whole family dwell together in one room. Meat in some parts of the Empire is a luxury obtained but once or twice a week. Long hours of labor, scanty fare, and poor compensation is the rule among them. Black bread and potatoes make up the chief diet of many of them. They can not live with any decency on the wages they get.

The regular hours of labor commonly observed, leaving out of consideration the working of extra time, vary from ten to twelve hours a day. In the provinces of Eastern and Western Prussia they are said to be pretty long. In Pomerania the average day of labor is eleven hours; in Posen, ten to eleven hours; in Schleswig-Holstein and Hanover, eleven hours; in Saxony, long; in Dresden and Bautzen, eleven hours; Zwickau and Meissen, eleven to twelve hours; Leipsic, ten to twelve hours; Plauen, twelve hours; Mecklenburg, ten to twelve hours. In the Grand Duchy of Baden the textile factories all work twelve hours, the porcelain factories thirteen, and the iron foundries more than eleven hours, but in the great majority of industrial establishments ten to eleven hours a day are worked; Bremen, only ten hours; Hamburg, ten to eleven hours. It is difficult, yea, impossible, to fix the exact number of hours worked. In one and the same district, and in one and the same branch of industry, much difference exists in the number of hours worked. The same factory does not hold to the same number of hours year in and year out, not even day after day, but is governed largely by press of business. Machine or manual labor, state of the market, increase or decrease of orders, competition, changes of fashion, demands of the season, etc., have much to do with determining the question. The general result is, that in industrial establishments which are run only during the day, and not at night, the number of hours worked, in the majority of cases, is from eleven to twelve, though in many cases only ten hours, and even less are worked, while in others, again, the men labor longer, but eleven to twelve are the rule. The very long periods of labor are customary with the industries working in stone and earth; and upon foods and articles of luxury, when too exhausting labor is common, such as brick-kilns, trench digging, glass-works, sugar factories, breweries, distilleries, cheese factories, etc., in which there is great irregularity. In the textile factories the work is very trying and of long duration, likewise in the iron foundries, where, however, long resting pauses are given. Much working of extra hours is also done, in fact, a great deal, in the large as well as in the small establishments, to fill increased orders. It is done in the majority of them all, and is not infrequently of long continuance. Where it is practicable there is a regular division of the labor into day and night work, but the working people look upon such an arrangement as unfavorably as they do an increase of the regular working force, because it deprives them of gain by extra work, although the extra work is at the expense of their health. In the country districts, where what is known as house industry is pursued, that is, the making of articles at home, the number of hours worked is very great, and the compensation paltry.

The work-people for some time past have been agitating for a decrease of the length of time worked a day, for a prohibition of work on Sundays, and for a limitation of female labor, but have thus far not effected anything.

More care is taken by factory owners than formerly to have their buildings and workshops arranged or constructed in accordance with the principles of sanitary science, and, as a result, there are a less number of diseases that can be traced to factory causes. The use of the electric light and the introduction of fresh air into the rooms where work is performed are constantly on the increase and very beneficial in their effects. Particular diseases natural to certain kinds of work, as handling of phosphorus, lead, and poisons of all

kinds, do not appear so frequently as formerly. Lead poisoning is a frequent complaint, which is said to be largely due to carelessness on the part of the laborers themselves. The manufacture of poisonous colors is decreasing. Comparatively little complaint is said to be made of the injurious effects attending the covering of the backs of mirrors with quicksilver. The porcelain, china, and stone ware factories are of an injurious character the more hand labor is used. Catarrh of the stomach occurs much among glass-blowers, caused by drinking much cold water; but they experience little trouble with their lungs, on account of the exercise given them. Pulmonary complaints are of frequent occurrence where glass is ground and precious stones and agates cut. Men in the factories making artificial manure suffer from catarrh of the stomach and spitting of blood. In the spinning mills and weaving mills the majority of the employés are consumptive and lacking in blood. The lung troubles are considered to be due to the dust that is breathed in; the poverty of blood, to bad air and poor food. There is more sickness in the spinning mills than in the weaving mills. Pulmonary complaints abound among the employés of cigar factories. Bad air, high temperature of work rooms, and dust, coupled with the fact that, strange to say, delicate people seek this occupation, and that the moral life of the operatives is low, cause these troubles. Children, too, are put too early to work in them. It is said that there is also a great deal of consumption of the lungs among workmen who live in the country but work in a neighboring town, and have a long way to go to and from work. The reason they thus suffer is alleged to be the intemperate use of ardent spirits, to which they are much addicted. They eat nothing warm at midday, but content themselves with bread and schnapps, and at night go to bed with a full stomach. The very moment a cigar factory is entered the men who live orderly lives can be pointed out at a glance, it is said. Those who make men's clothes suffer much from disturbance of the lungs and digestive organs. Among cabinet-makers there is much consumption; also among printers.

Regarding the effect of long hours of labor upon health there appears to be a diversity of opinion. In all those branches of industry where there is a high or changing temperature, draught, much dust, bad air, foul gases and vapors, or injurious materials worked, as phosphorus, quicksilver, and poisons, long hours of labor are of much more serious consequence than where the outside conditions are more favorable, or where the workmen are much in the open air. A day's labor of ten to twelve hours in a cement or match factory is much more injurious to a workman's health than fourteen to fifteen in a brick-kiln or saw-mill, it is claimed. Poor food, excessive use of spirituous liquors, the character of the workingman's home and its distance from his place of work, also have their influence. Labor in gas-works is very trying. The textile factories come in for a large share of complaint. In all their branches, as well as in the cigar factories, large numbers of unhealthy, miserable looking workmen are to be seen, whose state is largely attributed to the manner in which these factories are conducted. Much could be done in the improvement and ventilation of the rooms in which these poor people work.

The great mass of workingmen, it may be said, make from $2 to $6 a week. The average is 600 marks ($142) a year.

Under the paternal care of the Imperial Government the factory operatives of the Empire have been ranged into aid societies, for the purpose of securing to them support when disabled by sickness or accident, and it proposes to go a step further and make provision for their maintenance when old age enervates the hand and dims the eye. The consideration of such a measure will occupy the Reichstag at its present session.

In consequence of the socialistic agitation, more attention is probably paid to the workingman and his claims than would otherwise be the case, and various measures for the protection and relief of the laboring classes are being devised, with a view to quieting somewhat the restlessness which prevails among them. The legislation of the past few years has been very much in their favor, notwithstanding the socialistic law, and the Government is undoubtedly earnestly endeavoring to improve their condition, but while doing so is seeking, I think, to be somewhat paternal, and to make of the workingman a very dependent subject; but perhaps this is precisely what the German character requires.

In 1883 the Reichstag passed an act providing for a certain degree of support in cases of illness, not over thirteen weeks in duration, and in 1884 an act for their relief when injured by accident. Both of these measures are beneficent in design, and I believe are proving so in operation, but they are based upon a principle which is in serious conflict with the principles of individual liberty recognized in the United States. Under the first of the two enactments the great mass of the workingmen of the Empire are compelled to contribute at stated periods insignificant sums to common funds, to which their employers are also obliged to add a certain percentage, and are thereby insured free medical treatment, medicines, and appliances, and also daily a sum sufficient in amount to keep them and their families from absolute want. The law, however, affects chiefly those persons who are permanently employed in masses, and does not exert a compulsory power over those who are engaged in independent work, except in certain instances; who, nevertheless, are not excluded from its benefits, but are at full liberty and invited to join the societies or groups formed. The main feature about the measure which would be objectionable to the American workingman is this, that the workingmen are obliged to join beneficial organizations created and conducted under the supervision of the state and contribute at stated periods to its funds prescribed amounts. As an imperial law the measure looks like a good one, but it could never be introduced among a body of spirited republicans. Its compulsory feature would be fatal to it.

The laws providing for insurance against accidents are similar in scope to the law respecting sickness, and provide for the relief of workingmen and their families when overtaken by accidents while at labor. They embrace within their scope all the industries where there is any risk to life or limb, including shipping, building, farming and forest culture, and are understood to subject to their provisions about ten million persons. Fishermen and house employés are not brought within their terms; neither are hand workers, where there are less than ten employed and no machinery used; nor employés in shops and commercial houses.

The chamber of commerce at Mayence greets the accidents insurance bill as a measure of great public utility, worthy the gratitude of the nation, especially of the working people, to the Imperial

Government for its origination and execution, and merits the praise of the other states of the world as a happy solution of a part of the labor problem. The law secures to the working people, it says, at a slight cost of insurance, benefits which would come much dearer from private insurance companies.

If the object of the law, however, were to lessen the discontent of the working classes and bridge over the chasm which lies yawning between labor and capital, it has entirely failed in this respect, or at least achieved but insignificant success; and the chamber of commerce regrets to see that the embitterment of the working people against the state, by the political agitation carried on among them, has led them to overlook the beneficent measures adopted in their behalf in recent years, which has improved the material condition of the whole laboring population and put them upon a higher plane than those of neighboring countries, but hopes that as time passes on and the economical situation of the land improves, and the political agitation of the day quiets down, the working people will see and appreciate in a greater degree what has been done for them.

The Government has drawn up a measure for the relief of workingmen when disabled for work by age or other causes not provided for by the accidents insurance act. It will have to be considered by the Reichstag, and before it becomes a law will probably be a good deal modified. Every man comprehended by its provisions is to be entitled, on attaining his seventieth year, to give up work and receive an annual income of $30 for the rest of his life; and when he becomes totally disabled for work through any cause not provided for by the accidents insurance act, he is to get the same stipend, but is not to be granted the relief when the disability is brought about by violent or immoral acts or habits on his part, unless the party has regularly paid in his insurance fees for a period of at least ten years, in which case a part of the relief to which he would be entitled in a just case will be temporarily or permanently granted to him. To receive the pension on reaching one's seventieth year it is necessary that the applicant should have paid insurance fees regularly for thirty years, and to enjoy the benefits of invalid insurance he must have paid in his dues for five years. But when the disability is a consequence of the work on which the party was employed, and the above-mentioned time has not expired, one-half the regular relief will be afforded. An insurance year is to be 300 working days, and every day worked in excess of this time is credited to the next succeeding year. When, however, sickness intervenes to prevent work, the days of sickness are to be counted as days worked, and so is it to be when the insured is called from work by military or naval duties. The fund for meeting this insurance is to be made up by the working people, their employers, and the Government in concert, each bearing one-third of the burden.

As said above, those pensioned on account of age receive 120 marks ($30) a year; but those who become incapacitated for work through disability are to have 120 marks ($30) a year, and when they have been constant contributors to the insurance fund for more than fifteen years they are allowed, in addition, 4 marks ($1) for each year in excess of this time, but are not to be allowed to have more than 250 marks ($62) a year. Females are to be accorded two-thirds of the male insurance.

This insurance is regarded by the working people and many others as a pauper arrangement. The workingman, it is claimed, is not

guarantied as much relief under it as the average pauper now receives. According to the Leipziger Zeitung, the organ of the Saxon Government, it costs, on an average, 220 marks ($52) a year to take care of a pauper in Germany. The Frankfurter Zeitung, an influential liberal paper published at Frankfort-on-the-Main, puts it at about 400 marks ($96) per capita.

Three-fourths of the people of Prussia are understood to live on an income of less than 1,000 marks ($238) a year.

If it does cost, as represented, about 400 marks ($96) a year to care for a pauper, and the German laborer earns on an average about 600 marks ($144), how far can he be removed from the pauper category? The nominal wages for the leading governmental districts is put at 1.20 marks (28 cents) a day, or 240 marks ($57) a year. That is only 20 marks ($4.75) more than an assisted pauper receives. In Saxony the average wages of the ordinary workingman is 1.50 marks (36 cents) a day, or 360 marks ($86) a year.

In view of this slight disproportion between the wages of the industrious worker and the amount required to provide for a pauper, the American people are not far from right in denominating the labor of Europe "pauper labor."

The necessaries of life are high here, and I can not understand, for the life of me, how the great mass of the people of Germany live on the small wages and salaries they get. They all seem to be decently and well clothed for their station in life, and apparently well fed and pretty well housed, and yet 750 or 1,000 marks a year is a fine income among them. Ordinary food is not as abundant, and is dearer, in some respects, here than in the United States. The poor man in Germany does not begin to have the bill of fare that the American of a similar station in life enjoys.

Strikes among workingmen are few in number. The spirit and institutions of the country are unfavorable to them. Workingmen have not that opportunity to band together that they have in America.

Socialism appears to be constantly on the increase. In making its propaganda it sneaks around corners and lurks in by-ways, for the most part, but is ever growing stronger, and the stronger it becomes the milder it gets to be. In 1871, at the election of members of the Reichstag, the social democrats polled 124,655 votes, or 3 in every 100 of the total poll; in 1887, in the vote for members of the Reichstag, they cast 753,128 votes, or 10 in every 100. These are Government figures. There appears to me to be a good deal of materialism and socialism in Germany. Both are closely related to each other, and both, at their flood-tide, are death-dealing and destructive of a true order of society. Socialism is but the reflected shadow of materialism, for a selfish materialism on the part of the well-to-do can not fail to beget a threatening socialism on the part of the poor.

The socialistic movement here I regard simply as an exhibition of restlessness on the part of the lower classes.

The leaders of it probably cherish all sorts of utopian and anarchical ideas, but the great mass of the workingmen who take an interest in it do so, I am persuaded, without fully understanding its purport. They feel that their state is altogether too servile and unnatural a one, and that they do not receive a fair share of what their hands produce, and take an interest in the movement because it holds out some promise of a relief of the burdens which they bear;

but the idea of overturning all the governmental principles of the present time, and of a division of the property of the rich and well-to-do, is far absent, I believe, from the thought or wish of the great body of them. There are too much conservatism in the German character for that, and too fine a sense of justice. What they say they want is a reduction of the period of military service, which bears very heavily upon the laboring classes, from three years to two or one, the abolition of all exceptional laws, free speech, and a free press, and the right of public assembly, an obligatory education for the children of the workingman at the public expense, absolute prohibition of child labor, limitation of female labor, cessation of military and convict labor in competition with private enterprise, extension of the rights of the people, protection of the workingman, and, above all, just hours of labor at fair rates of compensation. What the rabid men want amounts, in substance, to anarchy.

The Social Democrats oppose all the social-political measures of the Government having in view the amelioration of the lot of the workingman, and in this policy of inimical opposition to everything that comes from the Government they seem to meet with the support of the working people. It may be that they do so because it takes from them their stock in trade, and because hand in hand with measures of social reform comes the imposition of increased taxes upon the people, and the continued enforcement of the law having in view the suppression of social democracy; but the effect of this attempt at suppression seems to be to only make the viper grow all the more. The fact of the matter is that the working people distrust the Government, and look upon almost every measure as a half-hearted act, and as contrived, in some way, for the advantage, after all, of the upper classes. The workingman is in the sulks, and is probably going to stay in them for some time to come. He wants a good deal, and does not get it. He says he asks for bread and gets in reply a stone. It is not in the power of the Government to give him all at once all he asks, and, in his passionate condemnation, he despises all things, good and bad. He bears the heat or cold and labor of the day, and gets the husks of life for his pains, he says, while his fellow-man in the upper circles of life looks leisurely on and gets the rich product. For me, however, to either criticise the Government or denounce the workingman is out of my province as a consular officer, and I refrain from either. My task is simply to endeavor to picture the actual relation at present of each to the other.

A good idea of the political sentiments of the Social Democratic party is to be obtained from a speech made in the Reichstag by Herr Bebel, one of its leading men, at the opening of the present session, and I therefore give it at length, translated by me from one of the German newspapers, as follows:

Rickert's [a liberal member of the Reichstag] critical remarks of yesterday had reference only to single small items of the budget. I and my friends, however, combat the whole system expressed by this budget. Materially affected by the military necessities, it appears again this year with a considerable increase. From 1883–'84 to now the military budget has risen from 335,000,000 to 363,000,000 marks ($79,000,000 to $86,000,000), an increase of over 8 per cent.; the marine budget from 27,000,000 to almost 36,000,000 ($6,500,000 to $8,500,000), or about 35 per cent.; and the pension list has increased since 1884–'85 about 42 per cent. The interest on the imperial debt now amounts to 27,000,000 marks ($6,500,000), when twelve years ago we had no debt at all to speak of.

We are told that we must keep up our readiness for war, in order to be prepared for every assault; that the position that we occupy with respect to the other great powers of Europe makes such an armed state absolutely necessary. Just so, too, was the cry when, in former times, Prussia alone sought an increase of military charges; a lightening of these burdens, it was urged, was not to be thought of until a unification of Germany had been wrought out. Then occurred, in 1866, something, which the opening address to the Reichstag terms an "un-Christian invasion" [much sensation], when German wrestled with German, when it was not hesitated, as Bohemia was entered, to incite the people there, by a proclamation, against their old rulers. But place this fact of history opposite the hypocrisy which would make us believe that the German nation is the most virtuous and most perfect upon the face of the earth. [Great sensation.] It is necessary to speak the like out from the tribune of the German Reichstag.

[Here he was called to order by the President of the Reichstag for unbecoming language applied to the address from the throne.]

Then we got the first German Union, in the North German Union, but there was no decrease of our military burdens there, for we had to prepare our armature for France. When the victorious war with France was over the old story still clung by us, and we were told to behold our enemy on the eastern frontier. Our preparations for war were even increased. At the time of the first Septennate, in 1874, our army numbered 401,000 men; in 1881, 428,000; in 1887, 467,000. Just so took place increases through the Landsturm law of 1875 and the law of 1881, respecting the improvement of the substitute reserve of the first class. Now we are going to get again a law on the organization of the Landwehr and Landsturm, with a view to a further increase of strength, and that at a moment when we are assured that we stand on a friendly footing with neighboring states, when alliances can be made with other nations, which will place their resources at the disposal of Germany in case of war.

What has brought us to this condition of things that we must be ever armed? Why, the annexation of Alsace-Lorraine, which can never be forgotten in France, and has led to the revenge agitation. When, in 1871, I pointed to this future result, and we (his party) held the annexation of Alsace-Lorraine for a political error, on account of the lamentable consequences which would necessarily follow it, we were laughed down, but you now see that it is the Alsace-Lorraine question alone that governs European politics. [Laughter by the Right.] You laugh over that: it would be much more agreeable to me if you would disprove it.

How is this thing going to end? We are assured that peace is not going to be endangered if we will only keep more strongly armed. I affirm the contrary. The more the nations arm themselves the greater becomes the menace to peace. I have therefor the authority of Count Moltke in the saying made December 4, 1886, in considering the military bill, that "All Europe stands bristling with bayonets; we find the nations everywhere equipped for conflict." This brings about, in the nature of things, an early combat. The stronger the armament the more necessary becomes action with the opponent, while the people can not endure these burdens for a lengthy period. Affairs will thus move on until the extreme limit is reached, and the war which will then arise will be one of the most frightful mankind has ever passed through. The murderous implements devised for slaughtering men in masses are all the time being improved, and in the construction of weapons such progress is made that weapons are pronounced unserviceable almost before they get into use even. Then there is the vast improvement of artillery and strengthening of works of defense.

Under the distrust which has for the present seized hold of all the powers of Europe, and with the eager watchfulness which characterizes them, a surprise can not take place as previously, and for that reason, the war will be of a duration unlike any of its predecessors. The day the declaration of war comes thousands will be made bankrupt, an economical consequence of our time. The fearful taxes, however, are borne only by the great masses. They have not only blood taxes, but property taxes to bear, for the taxes are chiefly imposed in the form of indirect imports.

A reform of the direct taxes in Prussia will not be made for a long time to come: the moneyed classes avoid taking these taxes upon themselves—that is, to change direct taxes into indirect. Prince Bismarck acknowledges that he is an enemy of indirect taxation, which, in any event, should be a taxation of the men of standing, without considerable receipts. We in Saxony have comparatively the best system of taxation. The direct progressive income tax yields 17,000,000 marks ($4,250,000), but the real-estate tax only 3,000,000, and the other sources of revenue only 1,000,000. Under a like system Prussia would get 192,000,000 marks in direct taxes, instead of 143,000,000, and in this wise make an end of its deficits. But this is

shunned to protect the great and burden the small; in other words, to form a great company for the insurance of the rich at the expense of the poor.

The brandy tax is a new burdening of the working classes. I do not speak of the net amount, but of the gross receipts from the same, which must come out of the pockets of the people. The maischböttichsteuer (mash-tub tax) and the material tax, less the export drawback, is estimated grossly at 30,930,000 marks, the consumption tax at 127,000,000 marks, so that in reality a brandy tax of 157,000,000 ($40,000,000) is in the budget, falling principally upon the laboring people, and affecting the rich only to a slight degree, through the use of fine liquors.

In the new bill for duties on grain it is admitted that the doubling of the duty will chiefly bear upon the price of bread. It is incomprehensible how a Government, that for years has claimed to be interested in the well-being of the laboring man, can present such a proposition. Herr von Minnigerode, in 1879, reckoned that one centner (100 pounds) of wheat gave 63 pounds of flour, and that 63 pounds of flour furnish 90 pounds of bread. The ration received by prisoner and soldier amounts to 1¼ pounds of bread a day, or to 5½ centners a year. If, now, the present increase of duty operates upon the price of bread, it will make a difference to the working-man of 7½ marks a year per capita ($1.79), or about 30 marks ($7.14) for a family of four persons, with an income amounting to 500 or 600 ($119 to $142), in the most cases not over 700 marks ($166). Such a step should be well considered.

If through this increased duty the price should be raised, 75 per cent. of the German farmers would derive no advantage from it, a large part only a moderate gain, and 1½ per cent., especially those owning hundreds and thousands of hectars (a hectar equals 2½ acres), take the lion's share; and these men belong principally to the princely houses, the aristocracy, and the bourgeoise; the Rothschilds, the Bleichroeders, and, as we heard stated yesterday, Schottlaenders and Cohns are they.

The names mentioned by Representative Rickert yesterday give me an interesting insight into the material situation of our agriculturists. Gentlemen affirm that the farmers are in a dangerous predicament. Now, men may think of the Jews as they will, but they are good business men, and when rich Jews buy the farms of the nobility they certainly expect to get a good return from the investment. [Smiles; denials on the Right.]

You do not suppose they invest their money to lose it?

The insurance of a stipend to the working classes, when disabled by age or sickness, is to them only a grant of beggar's alms, for the working-man receives no more than he would get from his commune in case of complete incapacity for work. In some instances even less, and the burden of it he bears alone, for the one-third which the Empire contributes to the fund he pays for ten times over in indirect taxes. You thus give him from the left pocket of the Empire what he has tenfold paid into the right pocket. It is true the employer pays also a third, but the laboring man must first work for him before the employer can pay it. [Laughter by the Right.]

This is the form in which the whole social legislation appears to the working-man. Even with regard to the law of insurance against accident, comparatively the best of the reform laws, the greatest dissatisfaction prevails in many quarters, for the employer can everywhere gull the working-man, and take from him again what he paid on his account. The large manufacturers of Rhenish Westphalia, therefore, desire to destroy the free aid-funds, in order to get the whole thing into their own hands.

The social reform is a material factor in holding down the working-man.

Therefore is it, that hand in hand go measures in the fields of technical unions and the strike order, which render every increase of wages impossible. And just now, when you will undertake the crowning work of social reform, you come here with a lengthening and sharpening of the law against socialists. Seven years ago the Worddentsche Allgemeine Zeitung said that with the crowning of the social reform by the age and invalid insurance act, the time would be at hand for the repeal of the socialist law, but our experience is just the reverse. When now religious conventicles of gentlemen of the highest rank meet to combat the Socialists, all such measures will be of no avail. You are only working in this manner for the subversion of the present laws of society, so that we are really left nothing more to do. We know sufficiently well how to avail ourselves of these measures. Gentlemen are always thinking *apres nous le déluge*, but, under present circumstances, should it run *avant nous le déluge*. Our position is to vote against the budget.

I am inclined to think that socialism here is more a menace to the crown than to private property.

It has often been alleged by our consuls that the German workingman is accustomed to leisurely performing his work, and that an

American engaged in the same occupation would turn off twice as much work in a given time as a German. I was recently struck by an article, in strong confirmation of this fact, which appeared in the Scientific American a short time ago, giving the views of a German professor on the subject, and it is so pointed in its application, that I think it worthy of reproduction in our Consular Reports, and I therefore give it here in full, as follows:

The following is an extract from an article by Professor Dieffenbach, in illustration of what he acknowledges to be a fact, that, American mechanics placed side by side with European artisans, the former show in a very short time their superiority. It is a manly confession of what is very generally known by every impartial observer. We give the extract in the professor's own words:

"More surprising still is the influence of North America upon handicrafts, and especially on the whole domain of mechanical technology. Here there is still a very wide difference between Germany and the United States. While our chemical technology has been distinguished by extraordinary advances, in consequence of which our chemical manufacturers have recently conquered a multitude of new markets, our mechanical technology has not developed at the same rate. What an American workman is able to accomplish by means of these tools may be seen by an example:

"The writer of this article spent a portion of 1878 and 1879 in Leipzig, where he became acquainted with a manufacturer of boots and shoes. One day an American applied for work. He stated that he had come to Germany on account of his son, who had a talent for music, and whom he wished to have educated at the conservatory. He said he was looking for work in order to pay his son's expenses, and he desired to use the tools that he had brought over from America. The manufacturer agreed. Now, the American appeared at his place daily, looked neither to the right nor to left, but attended to his work to the last stroke of the bell. The manufacturer soon noticed that he had obtained a man fully equal to the German hands in thoroughness and skill, and capable of turning off three or four times as much as any other, thanks to his exemplary diligence and his American tools. Wages being paid by the piece, the man earned more than enough to support himself and his son."

SUNDAY LABOR.

The demand for a regulation or prohibition by the Government of work on Sundays and holidays led to the appointment of an official commission to inquire into the practicability of the scheme. In October last the result of their labors was given to the public, and it appears therefrom that the great body of large manufacturers and leading business men of the Empire consulted on the subject have declared absolute prohibition impracticable, but a majority seem to have expressed themselves as favorable to limitation. A large number of manufacturers, representing the different branches of industry, were questioned upon the subject, as well as workingmen and a number of industrial bodies.

The report shows, according to the press, that it is customary in a very large number of establishments for work to be done on Sundays. In those employing machinery it is common with 49.4 per cent. of them for 29.8 per cent. of their workmen. In the establishments where hand-work is done it is usual with 47.1 per cent. of them for 41.8 per cent. of their workmen. In trade and commerce 67.8 per cent. of the houses work on Sundays, keeping 57 per cent. of their employés busy.

Neither factories nor business houses are kept going the whole day, as a general thing; but many, nevertheless, use the whole of Sunday. The result is that a very considerable part of the German working people get little rest on Sunday. The shops are open everywhere, so far as my observation goes, for a part of the day.

Sunday labor I consider not only a moral degradation, but a physical sin; and leaving even out of all consideration the religious aspect of the question, every workingman should jealously guard the observance of Sunday as a day of rest from the labor of his trade or occupation.

EMIGRATION.

The emigration from Germany, by way of German ports, and by way of Antwerp, Amsterdam, and Rotterdam, during the first ten months of 1887, is put by the German Government at 90,556 persons, against 70,841 in the corresponding period of 1886, and 100,031 for the same months of 1885.

Various causes bring about the emigration of the Germans.

The chief incentive to departure is to better one's material lot. The man at home hears of the success of his fellow-countrymen abroad and desires to tread in their footsteps. He is not moved so much, in my opinion, to escape military service and by a love of republican institutions as by the feeling that in the New World labor and sacrifice reap a richer reward than at home. In former years it was the immense tracts of cheap land that tempted many wanderers; now it is more the success of past swarms that lead others on.

It is becoming well known, however, that the emigrant of to-day has a much harder time getting along than those of former years, and we are not getting so good a material as in past times. A great number of those who go now are prevailed upon to do so by relations or friends in America, who send them the money with which to pay their passage thither. They are understood by me to be generally people who mean to work, but they come from the lower classes and are not possessed of means, nor are they skilled workmen. They have a hard time getting along at home, and feel sure that in the new land they can begin life under new and favorable conditions. They learn of the high wages paid abroad, and regard them as almost a princely income compared to what is received at home. Then, again, agricultural land in Germany is dear andhard to get hold of; while on the other side, in the far West, it has been got until recently almost for the asking.

Many, too, leave to escape military duty. About one in every eight or ten is actuated by this motive, as the statistics show.

While the emigration has been decreasing, the sentences on this ground have been increasing. In 1882 there were 203,459 emigrations, according to German statistics, and 14,119 cases of unauthorized emigration connected with failure to perform military service acted upon. In 1883, with an emigration of 173,574, there were 16,032; in 1884, with 148,979 emigrants, 17,485 cases; in 1885, with 110,028 emigrants, 17,965 cases. But it can not be said in all these cases that the parties leave simply to avoid military duty.

Many of them want to leave any way, but can not get the permission to do so until their time in the army has been served out, and so they run away without rendering it.

From no country in Europe, the Emerald Isle excepted, goes such a mighty stream of emigrants as from the German Empire. Large is the number of those annually who leave the Fatherland to seek a home and a subsistence in foreign parts. In the last sixteen years nearly 2,000,000 persons have left Germany to settle in foreign land, the most of whom were bound for the United States. These people

are considered for the most part to be in the active years of life, and chiefly of the male sex. But notwithstanding this great exodus, the statistics of the Empire show the percentage of increase in population to be greater than most of the states of Europe. Although their loss from emigration is much less than that of Germany, Austro-Hungary, Italy, Switzerland, Norway, and France are all behind Germany in growth of population, while Belgium and Sweden show about the same rate of gain as Germany, with England and Ireland, the Netherlands, and Denmark ahead. The drain from Germany is not noticed as it would be, on account of the birth rate and moderate mortality. But it makes the percentage of children, old people, and females here greater than would ordinarily be the case.

Dr. Becker, director of the imperial statistical office at Berlin, has made public during the past year an exhibit of the loss Germany sustains in wealth by emigration. He calculates that the average emigration will be 100,000 persons a year, each of whom will take with him, on an average, from the Empire 350 marks ($87.50), making a total of 35,000,000 marks ($8,750,000) from the Empire on this account a year. This, I think, is entirely too high an estimate, in view of the character of the present emigrants and the fact that large numbers of them have their passage to America paid by friends or relations in the United States. I have talked with a reliable emigrant agent on the subject, and he maintains that 100 marks a head ($25), on the average, is even an overestimate. I am told that one-third to one-half of the emigrants now are assisted across the water by funds supplied from the United States, and that many of them do not leave Germany with $5 in their pockets. This same gentleman says he knows of cases where the emigrant did not have 75 cents in his pocket, and had to be fed by him while having his passage arranged.

The money is sent to emigrant agents here from the United States, by friends and relations there of the people here, with directions to furnish the emigrants with tickets, but not to supply them with money. In this way they get on board ship with little or nothing in their pockets.

The wealth of Germany Dr. Becker puts at 175,000,000,000 marks ($43,750,000,000), or 3,000 to 4,000 marks ($750 to $1,000) per capita on the average. This amount increases, he says, at the rate of 3 per cent. a year, or 5,000,000,000 marks ($1,250,000,000), or 100 marks ($25) for each person. This increase, however, is reckoned in part upon nominal increases in values, and as one-half of the 5,000,000,000 increase may be due to this course, Dr. Becker takes 2,500,000,000 marks ($625,000,000) as at least the actual increase of wealth in the Empire, and reckons that the average saving in the Empire is 50 marks ($12.50) a head per annum. Judging by the statistics of several German states, he places the average annual income of each German at 400 marks ($100). The average value annually to the state of each man who leaves, he estimates is 800 to 900 marks ($200 to $225) or 80,000,000 to 90,000,000 marks ($20,000,000 to $25,000,000) for the whole 100,000 who emigrate. He thus makes the total loss to Germany annually by emigration reach $28,000,000 to $35,000,000. This estimate I regard as too far-fetched.

Dr. Becker also treats of overpopulation in Germany and whether emigration is not a relief therefor, and comes to the conclusion that Germany does not suffer from overpopulation. In this opinion I think he is correct. There is really no part of the globe yet over-

populated. He says that a relative overpopulation can be spoken of with respect to public economy, but this can be remedied.

But what the Empire apparently loses from emigration does not it receive back by the markets in foreign parts created by its children? Dr. Becker thinks, wholly not. Germany's trade with the United States, he says, is excelled by that of France, and has not increased since 1872 in the degree the latter has; and besides, the exportation from France to the United States has been in excess of the importation from the United States into France, while with regard to Germany, until very lately, the reverse has been the case, Germany having imported from the United States more than it exported thither. Then again, German profits from the trade with the United States are cut down severely by the competition it has to contend with there.

I am of the opinion, however, that Germany derives great benefit from the emigration in more ways than one, and that the balance of the account between the two countries is largely in favor of Germany, when we take into consideration the trade which the German population in the United States brings about with the old country, the immense sums that are sent hither by those abroad to aid the old folks and the members of the family at home, and the very great amounts that are spent freely by our people in traveling in Europe.

Dr. Becker is of the opinion that the United States offers a field for German enterprise which no other country does, on account of its order, its wonderful resources, its promising future, its freedom from warlike entanglements, and the great number of their countrymen there. He sees no indication of any abatement of emigration, but on the contrary thinks that it may increase in volume.

GRAIN.

Next to war's alarms, one of the chief questions occupying the attention of the press here during the past year has been the proposition to increase the duties on cereals. The large farmers have been clamoring for a further increase of the customs duties on grain, and the Reichstag has acceded to their petitions by increasing the duty on wheat and rye from 3 to 5 marks (71 cents to $1.19) per 100 kilograms (220 pounds), from 1.50 to 2.25 marks (35 to 53 cents) on barley, and raising the duties on oats, buckwheat, and other farm products.

The unfavorable situation of the farmers of the Empire and the low price of grain are the reasons given by the Government for asking an increase of the duties on cereals, for the purpose of protecting them from the inroads of the produce of cheap-producing countries.

It is generally admitted that the situation of the farmers of the Empire is an unenviable one, but their actual condition is maintained by the opponents of the duties on grain to be greatly exaggerated by the advocates of the measures for their relief. The loudest demand for protective duties is understood to come from the large farmers of North Germany. They are in an unfortunate position, but it is alleged to be largely due to their own fault, and their opponents denounce the measures for their relief as class legislation, and as an upholding of a species of feudalism.

The claim made by their opponents is that they are leading more the life of country gentlemen than that of practical farmers, and that the system under which they receive and hold their estates is a

ruinous one. The law of succession is understood to be faulty, and to burden the heirs to large estates with obligations they can not well bear. The oldest son generally inherits the landed property, but takes it subject to mortgages in favor of his brothers and sisters, who, like him, are noble born and bear the family title, and must live like people of station in life. They pay these relatives a higher rate of interest than they can realize from the produce of the farm. They do not produce grain as cheaply as the United States, India, etc., and the immense crops of those countries have been coming into competition with the grain of Germany to their utter consternation, and would soon press them into bankruptcy did not legislation intervene to protect them. What they need most of all, however, is said by some to be a reduction of their expenses and a transition to new methods of farm cultivation.

Judging from what I read and the spirit of our time, I should say that an old landed gentry is gradually becoming undermined by new conditions of life and labor, and is about to give place to common people.

The small farmers have not apparently been desirous for this protection, and the peasant farmers who are not in debt seem to do pretty well, notwithstanding the low prices received for grain. In this vicinity the farms are as a rule pretty small, and their proprietors do not grow much more than is required to meet their own wants, and such is understood to be largely the case in the south of Germany, so that it is a matter of small moment to these men whether grain be protected or not.

The great improvements which have taken place in the last thirty or forty years in the means of transportation have been of great advantage, in certain respects, to the farmers of Germany, but have brought with them in their train certain factors of an unfavorable character, such as the enabling of distant countries to pour their superfluous stores with ease and at low rates upon the European markets, to the discomfiture of the large farmers of Germany and other countries. In 1879, and again in 1885, Germany imposed duties on cereals. These did not stay the flood of foreign importations, but they were not wholly without benefit to those they sought to protect, although the desired and expected protection was by far not realized. In any event, they furnished a source of revenue to the Government, and relieved the nation, in a certain degree, from feeling the pressure of a direct tax of some kind. The duty of 1879, which was trifling, had no effect upon prices, but the increased duty of 1885, which was treble that of 1879, doubtless influenced prices to some extent, but as grain has constantly been declining in price it is difficult to fix this influence. Their tendency has been to keep the German farmer from becoming wholly swamped. He is greatly embarrassed.

Germany does not produce wheat enough to meet its own wants, and hence must look to foreign sources of supply, but can not afford to have what it does raise depreciated in value and rendered unprofitable by excessive importations. This year it has harvested about 40,000,000 hectoliters (110,000,000 bushels) of grain, or 6,500,000 hectoliters (17,881,000 bushels) less than it needs for its own consumption; of rye, too, large quantities have to be imported, most of which is obtained from Russia. The wheat is drawn principally from the United States, India, Russia, and Hungary. Australia, Roumania, and Canada are also resorted to.

The following exhibit shows the number of hectares (a hectare being 2½ acres) given to the cultivation of grain and potatoes in 1885:

Rye	5,826,618
Wheat	1,913,821
Spelt	374,553
Barley	1,739,524
Potatoes	2,916,333
Oats	3,776,838

The number of tons (2,200 pounds to the ton) of each article produced was as follows:

Year.	Rye.	Wheat.	Spelt.	Barley.	Potatoes.	Oats.
1885	5,820,095	2,599,271	466,447	2,260,645	27,953,643	4,342,357
1884	5,450,992	2,478,883	480,577	2,229,598	24,019,601	4,236,665
1883	5,600,068	2,350,878	446,779	2,131,202	24,906,431	3,718,469
1882	6,390,407	2,553,447	458,358	2,256,355	18,069,382	4,508,056

The average product per hectare was as follows:

Year.	Rye.	Wheat.	Spelt.	Barley.	Potatoes.	Oats.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
1885	1.00	1.36	1.25	1.30	9.59	1.15
1878-1884	.98	1.29	1.21	1.31	7.86	1.13

The crops of 1887, favored by good weather, turned out well. The wheat harvest of Prussia has been reckoned 102, taking 100 as the basis of an average harvest. Rye suffered somewhat from bad weather during the blooming period, and is put at 90. Barley on the average is put at 94. Oats were affected by dry weather, and gave hardly 85 per cent. of an average harvest.

In Silesia there was a full crop of wheat. Barley turned out well, and oats gave 90 per cent. of an average harvest. In the Rhine province the wheat yield has been estimated at 105, rye at 100, oats at 80 per cent. of an average crop. For Hanover the record is, wheat 110, rye 100, barley and oats 90 per cent. of an average crop.

With respect to Bavaria, the report was that wheat, rye, and barley gave in quantity, as well as quality, excellent results. Oats, however, gave a poor yield. Baden got a fine crop of wheat in quality and quantity; rye good in quality, but slight in quantity; barley various; oats poor.

These are reports by dealers. For two or three years past the grain crops have been good, and have consequently helped to force down prices, to the chagrin of the farmers. The past year wheat has been a little higher in price than in 1886.

Wheat and rye are slightly dearer in Germany than the quotations of the London market, but the difference is so slight that it has had no appreciable effect upon the consumer.

The millers of Germany have suffered for years from unfavorable business conjunctures. The small millers suffer from competition with the larger ones, which the increased duty on grain will hardly lessen, but rather intensify. The latter are not only much better situated in material and machinery, but better able to take advantage of all favorable provisions of law affecting the export trade. The

effect of the increased duty on grain is also said to drive the grain business out of the hands of small dealers into those of the large concerns. Various factors have conspired in Germany to take the grain business from certain localities and destroy the small millers, such as improved machinery and means of transportation.

The chamber of commerce here makes complaint that the German farmers cultivated too much "English wheat," which gives a larger product in grain, but is poorer in gluten than the native wheats, and in consequence of this poverty in gluten is unsuitable for milling. The cultivation of this sort of wheat is apparently lucrative, it says, but in reality injurious to agriculture. It is always more difficult to sell this wheat than the German grain, and it must be disposed of at lower prices. It must always be mixed with superior wheat when milled, and, as a consequence, foreign wheat producers derive an advantage from this cultivation by the German farmers of a poor wheat for the sake of a large product, as their wheat must be purchased at advanced prices to mix with the poor German article. The produce exchange at Berlin is said to be disposed to exclude this variety of wheat from its boards.

The production of flour is always strongly affected in this country by the prices ruling for potatoes, etc. Potatoes form one of the staple foods of the people and enter largely into the daily bill of fare of the poor. Cheap potatoes always mean lessened consumption of bread.

In the course of this dispatch the effect of the increased duties on grain on the laboring man has already been pointed out.

SUGAR.

Other legislation has been in favor of the farmers, or, as they are denominated here, the agrarians, such as oleomargarine, brandy, and sugar acts.

In past years they have been very much favored by the sugar tax, and under its stimulation the sugar industry of Germany grew to be a great enterprise, but ultimately a very unprofitable one, through the great stimulus given to it by the export drawback, which brought about excessive overproduction.

It used to be calculated that 12½ cwt. of beet roots would give 1 cwt. of sugar, and in 1868 a law was passed fixing a tax on the raw material on this basis, by which it was supposed 10 marks ($2.50) would be paid as a tax on each cwt. of sugar, and to foster exportation a draw backof 9.40 marks on the cwt. was granted. But improved methods of manufacture and refining obtained 1 cwt. of sugar from 9 cwt. of roots, and even from 8 cwt., and got sugar even from molasses, which the law of 1868 did not tax at all. The sugar manufacturers, therefore, instead of paying a tax of 10 marks, as contemplated by the law, paid in reality only 7 marks 80 pfennings a cwt., and on exportation got a drawback of 9 marks 40 pfennings, thus receiving a fine bounty. The large profits realized and rich dividends declared caused lots of people to engage in the industry, and soon great overproduction took place and profits dropped to a minimum, and a general collapse threatened to occur. Germany filled England and other countries with cheap sugars, at the expense of the German imperial exchequer. In 1886 the sugar tax was raised from 1 mark 60 pfennings (40 cents) to 1 mark 70 pfennings (42½ cents) on each 100 kilograms (220 pounds) of beet roots, but the ex-

port drawback was not touched, because other countries were giving bounties; but the Government could not stand the drain made upon it by the drawback, and this year a new tax of 10 marks ($2.50) was levied on each 100 kilograms (220 pounds) of sugar for house consumption, and the tax on raw material reduced by $\frac{1}{7}$, but the export bounty still continues, and, it is thought, will eat up most of the revenue realized by the new tax.

WEAVING.

The weavers have complained for years over unprofitable prices In almost all branches of the business last summer manufacturers, it is said, were so eager to sell that buyers could almost name their own terms. Overproduction prevails with the improved machinery of the present time, and foreign markets are being sought for to take up the surplus production. The United States is a large taker of the products of Germany, but it is believed can be made to take much more than it does, and it is understood that with this idea in view America is being worked up with more energy than ever by traveling agents. So also is South America. Australia and India take more of the products of Germany than formerly.

WOOL.

At the close of 1885 an energetic effort was made by wool growers to procure the levy of a customs duty on wool imported into the empire, but this agitation was offset by a counter movement to prevent its consummation, made by the woolen manufacturers of the country and others, who urged that such a measure would disastrously affect the woolen manufacturers. Germany can not, it is said, produce, either in quality or quantity, the wool required in manufacture by its people, and in 1884 did actually produce but 21 per cent. of the whole amount of raw and washed wool used in the industries of the land. Moreover, the climatic conditions and soil of the country are not as favorable to sheep-raising as those of some other lands, and as a consequence Germany can not compete with them. A duty on wool would be a blow at the very existence of the German woolen manufacturers, which represented in 1884 a value of $62,000,000, and, by enhancing the price of their products, hamper them in their competition with the world at large. But the wool growers have not become completely silent.

IRON AND STEEL.

The iron and steel trade has been in a very unsatisfactory state for some years. Efforts have been made to relieve the strain by formation of syndicates in the various branches of the industry during the past year, and prices have thereby been pushed upward to some extent.

According to the German Iron and Steel Men's Union, the amount of raw iron consumed in Germany during the year 1886 was 3,206,270 tons, against 3,660,345 in 1885, 3,599,106 tons in 1884, and 3,433,816 tons in 1883; and according to the union's statistics, the raw-iron production in Germany in 1886 amounted to 3,339,803 tons, the iron imported to 169,454 tons, and that exported to 302,985 tons.

The amount of raw iron produced in Germany during the eleven months ending November 30, 1887, is said to have amounted to 3,547,497 tons, against 3,047,436 tons during the corresponding period in 1886.

COAL.

Coal mining has had to contend with foreign competition, and the year 1886 is said to have been the most unfavorable one in twenty years for this industry. Many mines were operated with a loss, and the number of those able to declare a profit lessened. For the first time since 1875 there was a decrease in production, and a decline in the price of coal occurred. This is said to be due not only to a diminution of orders from various branches of industry, notably the railroads, but to an increased use of English coal on the North Sea coast, and to lower freight rates on French and Belgian railroads, giving foreign coal an opportunity to compete strongly in Luxemburg, Lorraine, and France with German coal.

OTHER METALS.

The silver production in Germany amounted in 1886, according to newspaper report, to 297,718 kilograms (654,979 pounds), against 277,871 kilograms (611,316 pounds) in 1885, or an increase of 7 per cent., mostly due to an importation of foreign ore.

Tin and copper have been very high in price for several months, owing to speculative combinations.

PETROLEUM.

The duty levied in 1885 on petroleum barrels is said to have had a bad effect upon the trade, and to have brought about much loss. This duty, which is said to bring but little revenue to the Government, is understood to be a veritable thorn in the flesh of the petroleum trade. The abolition of the duty is regarded by the petroleum dealers of this vicinity as a pressing necessity for their business.

These barrels have been subjected to duty, on the ground that they were coming into competition with German barrels, and could be regarded as coming under the designation of "fine coopers' articles" in the German customs tariff, and consequently dutiable at 10 marks ($2.50) per 100 kilograms (220 pounds).

But the trade say that these barrels do not come into competition with German barrels, as they are employed, on account of their cheapness and durability, for many purposes to which German barrels can not generally be applied. They are much used in packing, and in default of them recourse must be had to other articles for packing purposes. They can hardly be done without, for the German coopers are unable to offer any substitute for them and their barrels are much dearer and far less durable.

Concerning American petroleum, the Chamber of Commerce of Wiesbaden (near here) says that the Russian petroleum, especially the brand known as the "Nobel," does not stand any longer behind the American in quality. It is clear as water, has a high degree of inflammability, and gives a bright light from all burners which conduct a sufficient amount of air to the lamp. As it can be bought for less money than the American, it is a formidable competitor with it,

and if the Americans and Russians do not arrive at some understanding, the petroleum war will assume larger dimensions.

The South German trade in petroleum barrels is understood to be in the hands of Mayence and Mannheim, but it is probable that Mayence's share in it will be wrested from it by Mannheim, as Mannheim is better situated in respect to freight rates. The duty, it is held, can not but be of advantage to the foreign producers of the barrels. When re-exported the duty paid on them is refunded.

Since the duty was levied, petroleum barrels have gone down very much in price, so that the duty on them fails to protect German barrels, but most of them are returned to the land of their origin any way, and very few are understood to remain in Germany.

PORCELAIN.

On this subject I have but to say that the royal porcelain works at Meissen, Saxony, which for so long a period have had a marked reputation the world over for the excellence of their products, will be compelled in future, in consequence of the constant diminution in recent years of their receipts, year by year, caused by the tendency of the public to buy the cheaper goods of the general trade, to depart from the practice hitherto observed of making only fine and dear porcelain, and decide to turn out goods of a cheaper and ordinary character.

No want of care in the administration of these works has led to the decrease experienced in their annual sales, but the increasing competition in the porcelain business, the change of taste and the cheap imitations of silver ware now largely bought by the public, have been the causes instrumental in bringing about a decline of the business of the royal porcelain works. The Kingdom of Saxony can not afford to run these works at a positive loss simply for the honor of making some of the very best china of the world, and the order has gone forth to make both fine and ordinary, dear and cheap wares.

EXPORTATIONS FROM MAYENCE DISTRICT.

The declared exports from this consular district to the United States during the year 1887 were as follows, compared to 1886:

Articles.	1887.	1886.
Agate ware and jewelry	$219,713.44	$240,132.63
Aniline colors and chemicals	248,697.78	232,991.18
Cement	102,923.90	119,705.62
Glue	45,856.60	16,575.14
Hops	99,017.60	270,681.86
Leather	138,687.83	127,750.46
Preserved fruits	11,035.25	9,662.00
Straw pulp	19,181.07	2,110.25
Sundries	63,759.41	37,648.08
Wine and brandy*	743,162.17	677,697.23
Total	1,692,035.05	1,724,951.45

*The brandy was insignificant in amount.

The total exportation has more than doubled in value in the last fifteen years, amounting in 1887 to $1,692,035.05, against $745,970.30 in 1874.

AGATE BUSINESS.

The exportation of agate ware and jewelry from the Mayence district to the United States amounted to $219,713.44 in 1887, against $240,132.63 in 1886.

Business among the agate cutters of Idar and Oberstein was about the same in 1886 as during the previous year. Much complaint is made by them over low prices and small profits.

The stones that are worked up are mostly of an ordinary character, and workmen receive very poor compensation for their labor. Small articles are chiefly made, and little demand is made for large objects, such as vases, baskets, and the like. Recently some stone from the western part of our country has been worked up, and while hard to cut meets with much praise.

The regular agate is less cut than formerly, and the so-called tiger-eye stone has taken its place. Large quantities of this stone are converted into cheap cameos. It will probably hold the field until some novel new-comer appears upon the scene. Other half-precious stones are manufactured in large quantities in the numerous workshops.

What are known as the African articles were much affected by the disorderly state of the Soudan region, as they have been for several years past. The caravan trade has become almost completely broken up by the unsettled state of that country, and caused the merchants of Cairo to make use of the route passing through Massaneh for communication with the interior of Africa. The restoration of order in the Soudan will exert a favorable effect upon business in Idar and Oberstein.

The workmen who are known as agate borers were not kept busy during the year. The engravers, or cameo cutters, owing to unprofitable work, have materially decreased in number during the last few years. They were pretty well employed last year, but are badly paid for their work.

It is surprising how agate cutting and polishing, which some years ago was a very remunerative employment, has depreciated in value, and for what a trifle nicely-cut stones can be purchased. Finely-cut stones, however, are not turned off at Idar and Oberstein. It is only with the inferior kinds that the people busy themselves.

The goldsmiths, that is, the small men working at home for others, who form the largest part of the community, had at times an utter lack of work. The regular factories, on the other hand, were always on the go, and through their manner of doing business and use of machinery are gradually completely destroying the small workshops.

The officials of the district made some attempt in 1886 to encourage learners and raise the standard of work, by offering premiums for clever productions, but met with no success.

CHEMICALS AND ANILINES.

Exportation from this consular district, $248,697 in 1887, against $222,991 in 1886.

For several years much complaint has been made by the chemical and aniline trade of unfavorable business, of low prices for raw materials, a hampered export field, and immoderate competition.

It appears from the report of the secretary of the union for the protection of the interests of the chemical industry of Germany

submitted at the annual session held in Frankfort in September last, that the year 1886 was relatively a pleasing one to the trade. Notwithstanding quite an increased production, which took place in all branches of the chemical industry, the products manufactured were readily taken up by consumers. This favorable receptivity, however, was accompanied by a further fall in the prices of a large number of articles, to the chagrin of the manufacturers; but they managed to check the decline by the formation of combinations, and even to bring about a rise of prices in some instances.

In the chemical industry 23,528,498 days of labor were performed, for which 61,797,490 marks ($15,449,375) were paid out in wages. The factories made more money than in the preceding year, and were able to declare higher dividends. In 1886 there were 82 stock companies, with a capital stock of 162,540,842 marks ($40,635,210).

These declared dividends amounting to 11,659,895 marks ($2,914,974), or 7.17 per cent. on the capital invested. This rate, however, was not shared by all the companies, but principally by the older concerns. Among those factories which have been in operation since 1881 the rate was 9.25 per cent. Taking into consideration only such factories, for the purpose of making a comparison with preceding years, we find the average dividends declared by these factories from 1882 to 1886 were as follows:

	Per cent.
For 1882	13.07
For 1883	11.04
For 1884	8.42
For 1885	7.92
For 1886	9.25

In the soda and kali branches the dividends were as follows:

	Per cent.
In 1882	9.89
In 1883	9.27
In 1884	6.54
In 1885	5.58
In 1886	5.68

No branch of the chemical industry, it is said, has made such a rapid stride forward in the last ten years as the soda industry. In 1878 the entire production in all Germany amounted to only 42,500 tons; now in 24 establishments about 150,000 tons are manufactured. Ten years ago Germany had to import 27,000 tons of soda to meet its wants; that is, 40 per cent. of its whole requirement; now it is not only able to supply its own needs, but has begun to export, notwithstanding a greatly increased consumption at home. In that time, too, 98 per cent. calcined soda has gone down in price from 20 marks to 8 marks ($5 to $2), notwithstanding an increased customs duty on the article.

In anilines the dividends declared by the German Aktien-Fabriken (stock companies) were as follows:

	Per cent.
In 1882	20.53
In 1883	14.06
In 1884	10.49
In 1885	6.70
In 1886	9.45

There was an increased exportation of anilines. In 1885 there were 4,645,000 kilograms exported (10,219,000 pounds); in 1886 there were 5,700,000 kilograms (12,540,000 pounds).

Among factories making explosive stuffs the average dividends declared were:

	Per cent.
In 1882	9.39
In 1883	10.51
In 1884	8.09
In 1885	10.01
In 1886	15.46

The favorable development of business in this line benefited principally the old works, it is said, which by combinations managed to keep up high prices, while they took advantage of low prices for raw materials. While they thus flourished certain of the younger works were not able to distribute any dividend at all. This year (1887) glycerine has doubled in price and materially affected the prospect for good dividends for the year.

The factories making artificial manures (superphosphates) have been realizing declining profits since 1882. Their average dividends during the past few years amounted to:

	Per cent.
In 1882	6.74
In 1883	5.79
In 1884	4.16
In 1885	3.30
In 1886	3.52

The unfavorable exhibit is not due to any diminution in the consumption of artificial manures, but has been brought about by the employment of a new fertilizer, drawn from an unexpected source, and working marvels, according to some accounts, and the manufacturers of other artificial manures having become frightened by its appearance in the market, with the claims made for it, have been lowering the prices for their product. This new fertilizer is a meal or flower obtained by simply grinding up the slag derived in the working up of crude iron by the Thomas-Gilchrist process. Formerly regarded as a refuse article to be got rid of in the best way possible, in the last few years it has come to be recognized in Germany as a valuable fertilizing agent, and an excellent substitute for superphosphates. Five years ago this stuff, I believe, was considered worthless; to-day 3,500,000 centners (175,000 English tons) of it are ground into a fine powder, to be scattered over the fields of Germany to increase the products of the husbandman. Wonderful, indeed, seem to be the claims that are made for it.

A report on this fertilizer, based upon a pamphlet published by Professor Wagner, an official in charge of the Hessian experimental agricultural station at Darmstadt, giving the results of experiments made by him with it for a couple of years, appeared in the July number of the reports from the consuls of the United States, published by the Department of State. The claims of this new aspirant for agricultural honors should be looked into by our farmers. Professor Wagner is loud in his praises of it. It can be easily and cheaply manufactured, and is considered to be a cheap and splendid substitute for superphosphates.

The proposition to employ ground Thomas slag in the place of superphosphates was, like many new notions, received at first with an incredulous shake of the head, or with laughter. The most of the agricultural chemists manifested an inimical, or at least doubtful, spirit towards it; farmers eyed it with suspicion; and, of course, the superphosphate manufacturers thought and said that no good

could possibly come out of it; but it pushed its way into popular favor. The infection has got spread over Germany, and is now reaching unto foreign parts.

The mills making the Thomas' phosphate meal will not be able to supply the demand springing up, as there is not enough slag produced. To answer the increasing demand slag will have to be obtained from abroad, and several German mills are understood to have taken steps to procure material from England and Bohemia. In Germany the number of establishments working up iron under the Thomas process is understood to be sixteen.

The German mills are understood to have formed a syndicate under fixed conditions, and to be selling their products at union prices, which assure a fine profit to the manufacturers, as the ground slag can be sold so much cheaper than other fertilizers that the public do not make any objections to prices. There is money in the business, and no capital, it is said, at the present time is invested with less danger of loss and greater certainty of gain than in this new enterprise.

Establishments engaged in the production of technical, pharmaceutical, and photographical preparations have apparently been more prosperous than those in the branches we have been considering, and their average dividends show a rise rather than a decline, as follows:

Average dividend in—	Per cent.
1882	11.88
1883	11.05
1884	15.50
1885	15.01
1886	16.83

This gratifying average result, however, was not participated in by all the establishments in this line, but is understood to be chiefly due to the favorable record of one of the most important of these factories. There were decided declines in prices in this branch of the chemical industry also.

The factories engaged in the manufacture of mineral colors met with a gratifying market at home and abroad. Only with Austria were their sales small, on account of the high customs duties of that country, and with Scandinavia, on account of a rigorous law there respecting arsenic. The competition was strong and prices were held up with difficulty. Particularly unfavorable to ultramarine was the market, due not to overproduction, but to a decreased consumption, brought about by a change in the fashion and the ultramarine being pressed out of the market by other coloring stuffs. Exportation of poor qualities of ultramarine was impossible, in consequence of high duties, and only the better sorts and specialties it is found can stand the customs duties. The ultramarine factories have been kept going under very discouraging circumstances, and it is said that there are hardly, in fact, in Germany, more than two or three of these factories that are not run at a loss.

PRESERVED FRUITS.

Exportation in 1887 $11,035.25 against $9,662 in 1886.

Very good fruits are grown in this region of country and there are a number of preserving factories in this vicinity, producing very fine goods; and they would like to be large exporters to the United States, but the high duties there kept their sales down to modest

figures. Were it not for the customs duties on the other side, they could do a first rate business with the United States, they say.

The fruit crops of 1886 and 1887 were, taken as a whole, very unsatisfactory in this vicinity.

HOPS.

Exportation in 1887 $99,017.60 against $270,681.86 in 1886.

Overproduction characterized the hop trade of 1886–'87, notwithstanding the American crop was a failure. England had an abundant crop, Germany a good medium one, one-third of which remained for export purposes, and Belgium a good half crop; and there was a large stock on hand of old hops from previous years. Happily for Germany the American crop was an inferior one, and the English very poor in color and quality, and the good German hops were consequently called for, not only from America but from England. Profits, however, were slight.

Alarmed by reports of immoderate production, the hop planters sought to turn their products at once into money, and in this way ran down prices. Speculators got the hops, and the producers, notwithstanding a good harvest, did not make money enough to cover the costs of cultivation.

The German hop-growers are said to be in an unfavorable situation from too great a cultivation of the plant.

Germany exports hops in all directions, and imports also to some extent.

The hop crop in Europe of the present year is said to have turned out very well and to have given the Continent more than enough to satisfy its own needs. In Germany the crop is less in quantity than that of last year, but much better in quality, but, nevertheless, not altogether satisfactory.

It is said that much less hops will be exported to the United States during the next twelve months, as the crop of 1887 in the State of New York was a good one.

BREWERIES.

Turning from this subject of hops, it is interesting to note the flourishing condition of the beer-breweries of Germany. For some time fortune has smiled on them, and a large number of brewers have availed themselves of the favorable opportunity which profitable times present to convert their business into stock concerns, as the public is disposed to eagerly snap up brewing stock.

The largest brewery in Germany is understood to be the Spattenbräu, at Munich, which produces about 500,000 hectoliters (11,000,000 gallons) of beer a year. The famous Löwenbräu brewery there turns out about 350,000 hectoliters (7,700,000 gallons) a year.

Raw material was cheap in 1886–'87, and as a consequence the stock breweries have been enabled to declare higher dividends. The most of the breweries run by stock companies have been declaring dividends of 5, 6, 7, 8 and 9 per cent., according to a tabular statement published by the Frankfurter Zeitung, while some have done even better. One very successful brewery is credited with a dividend of 43⅓ per cent. and another with one of 20 per cent., but all the rest cited are below this figure. The stock of most of the breweries is quoted away above par.

According to official statistics published at Berlin, there were 10,365 breweries in operation in Germany in the year 1885–'86, of which

9,326 were regular breweries, which used 487,501 tons of grain and 3,045 tons of surrogate, producing 24,290,700 hectoliters (534,395,400 gallons) of beer, or 68 liters to each member of the population.

To make a hectoliter of beer 20.09 kilograms (44½ pounds) of grain and rice and 0.10 kilograms of surrogate were used on the average. These statistics are for the territory paying taxes to the Imperial Government, but Bavaria, Wurtemberg, and Baden, as well as Alsace-Lorraine, are independent and not included in the statistics. Bavaria produced 12,665,700 hectoliters (278,645,400 gallons), or 234 liters* to each member of its population. Wurtemberg 2,878,800 hectoliters (63,333,600 gallons), or 144 liters to each person of its population. Baden 1,244,500 hectoliters (27,3.9,000 gallons), or 78 to each, and Alsace-Lorraine 690,700 hectoliters (15,195,400 gallons), or 44. Bavaria, however, does not consume all the beer it manufactures. Its beer is in great demand in other parts of Germany. The total production of beer for the entire Empire would, therefore, be 918,948,800 gallons.

LEATHER.

The exportation was in 1887 $138,687.83 against $127,750.46 in 1886.

The leather men desire the duties on leather increased in certain respects, and for some time the Reichstag has been petitioned for higher duties. Sole leather, glove leather, cordovan moroccos, Turkey moroccos, patent leather, and all colored leathers, with the exception of colored Russian leather, parchment, and boot-tops, pay a duty of 36 marks ($9) per 100 kilograms (220 pounds); all other leathers 18 marks ($4½) a 100 kilograms. The demand by the trade is for the same duty for all kinds. On leather belting for machinery the duty is 50 marks ($12½) a 100 kilograms, and this duty the manufacturers of the article desire to see raised to 80 marks ($20) if the 18-mark duty just mentioned becomes doubled.

WINE.

The amount of wine exported from this district to the United States has been constantly increasing in volume, as appears by the following exhibit of the last ten years:†

Year.	Value.	Year.	Value.
1878	$181, 911. 50	1883	$522, 978. 23
1879	277, 888. 78	1884	548, 027. 47
1880	429, 437. 31	1885	573, 355. 18
1881	394, 291. 60	1886	677, 697. 23
1882	564, 998. 57	1887	743, 162. 17

As nearly all the Rhine wine shipped to the United States is declared at this office, a good idea can be formed of the growth of the trade with the United States.

The vintage of 1886 was really gratifying in quality, but very unsatisfactory in quantity. As a consequence very high prices were paid for the new product. For the most ordinary wines 450 to 500

*There is a little brandy included, but it is insignificant in amount.

†A liter is a quart, or rather 1.0567 quarts, to be exact.

marks ($112 to $125) a stück (1,200 liters) were paid. The wine of 1886 was the best since 1868—a period of eighteen years.

When it became apparent early in the summer that the quantity of grapes harvested would be slight, the poor wines of the previous year, of course, went up in price, and quite an animated demand for them occurred, which soon almost emptied the cellars of the producers of what was in them of the kind. Principally French wine dealers made these purchases. For what? To make French claret for the American and other markets?

Of the vintage of 1887 it is only necessary to say that it was of very inferior quality and poor in quantity, and that the product that was obtained was much injured by frost.

A good deal of complaint is at present made by the dealers in wine of competition in the trade, of heavier business costs, and slighter profits. A great many unprincipled fellows are said to be in the business, who do great injury to the long established and reliable houses by taking poor wines and the refuse of the presses and manipulating them into fine-appearing and well-tasting "wines." The general business situation, too, has had an unfavorable effect upon the trade.

Germany, however, can not be said to be a wine country. While along the Rhine the grape is extensively cultivated, and the wine realized a fine product, comparing favorably in its best sorts with that of any other land, the record of the years is many poor vintages to one excellent one. The climate of the Rhine is not fostering enough to bring the grapes to complete ripeness. The grape is cultivated under great difficulties, and a number of years of patient waiting are generally requisite from one bountiful golden harvest to another.

The production of wine in Germany is limited, too, and could not respond to a greatly increased demand.

In the last dozen years the amount of wine produced by France has very much decreased, and to supply the demand made for French clarets recourse has been made by its wine merchants to the wines of other lands for conversion into good French articles. Not only have the wines of Spain, Italy, Austria, etc., been resorted to for this purpose, but the white wines of the Bavarian and Hessian Palatinate, as well as those of Alsace also. The very cheapest and poorest white wines are bought, fortified with alcohol, and transformed by artificial means into bright, nice-tasting clarets.

It is said that the wines of the Rhine are meeting with more favor in England than formerly, and are taking a modest place at large banquets, dinners, etc., beside the prevailing wines of France and Spain.

For years statistics have been compiled by the Government respecting the results of the vintages in the former Duchy of Nassau, now known as the district of Wiesbaden, where lie the most renowned of the German vineyards. With regard to the year 1886 the statistics gathered show that in the most favored cases the grapes yielded in quantity what is known as a one-third to one-half of an average vintage, but for the most part only one-fourth to one-sixth vintages were obtained, while even one-sixteenth of an average vintage was received. In one district, however, was three-fourths of an average vintage realized. But what was lost in quantity was in a large measure made up in quality, in wine cellared being classified as "splendid," "very good," and "good."

The amount of vineland in this district (Wiesbaden) and the amount produced have been as follows:

	1876.	1880.	1886.
	*Hectares.**	*Hectares*	*Hectares.*
Vineland	3,482.58	3,519.54	3,722.71
Productive	2,802.16	2,944.67	2,916.97
White grapes	2,669.15	2,827.41	2,820.05
Red grapes	133.01	117.26	96.92

* Two and one-half acres to the hectare.

The Riesling is the kind of grape mostly planted, which in the famous vineyards of Winkel, Rüdesheim, Johannisberg, Geisenheim, Hochheim, Eltville, Erbach, Hollgarten, and Hattenheim is almost exclusively grown. With this grape 1,446 hectares were planted in 1886. Next the Riesling comes the Kleinberger in popular favor. In 1886 there were 481 hectares given over to this grape. Then comes what is known as the Austrian grape, planted on 442 hectares.

The number of hectoliters (22 gallons to the hectoliter) of wine realized in 1886, compared to former years, was as follows:

	1876.	1880.	1886.
White grapes:	*Hectoliters.*	*Hectoliters.*	*Hectoliters.*
Riesling	36,407.60	7,539.60	18,836.22
Kleinberger	12,881.60	2,175.60	6,081.80
Austrian	9,525.20	832.50	7,396.24
Other sorts	13,873.60	3,472.00	9,683.47
Total	72,688.00	14,019.70	41,467.73
From red grapes	2,381.60	431.41	1,430.36
Grand total, white and red	75,069.60	14,451.41	42,898.09

In what is known as the Rhine Province no accurate statistics are gathered respecting the vintage on the Moselle and Saar. In respect to the relations the different varieties of grapes bear to one another, the cultivators themselves in the several places do not seem to be posted, and no basis can be arrived at for estimating their productiveness; nor do they seem to agree as to what is a full, half, or quarter crop. A request made by the chamber of commerce at Treves to the Government to institute a gathering of statistics was denied on the ground that it is surrounded with too much difficulty. It is said that about 18,000 fuder of wine is got annually on the Moselle, and about 1,300 on the Saar.

There has always been discontent on the part of the trade with respect to the application to wine of the law of 1879, against the adulteration of foods and drinks, on the ground that it was not precise enough in its definition of adulteration, and gave venturesome and fraudulent dealers an opportunity to make great gain in questionable practices, while old firms of respectable standing could not hazard their valuable reputation by running the risk of being cited before court for what was in itself a harmless manipulation of inferior wines. The courts are understood to be in doubt on the subject, and great pressure has been brought to bear upon the Government by the trade for a full and strict definition by law of what is permissive and

what prohibitive in the improvement of wine for consumption. The address from the throne to the present Reichstag promises a consideration of this matter, and it is expected that the Reichstag at its present session will take action on it, but there is such a diversity of opinion regarding proper and improper treatment of wine that it is hard to reach a just conclusion.

According to the bill introduced, however, the subject is to be left pretty much in its old doubtful state, and simply the use of substances injurious to health forbidden; but as there is great difference of opinion as to what is hurtful and what is innocent, the old thorn will still torment the flesh. What is wanted is a law which, while forbidding the manipulation of wine in a manner hurtful to health, permits its rational improvement, according to the methods of Gall and Chaptal, in removing immoderate acidity before fermentation, by thinning or deadening the must, without having to label the product "treated wine;" a law which shall define with exactness where the designation wine ceases and falsification begins, and prescribe what methods of improvement are allowed and what prohibited.

The trade never know how a certain treatment is going to be pronounced upon by experts, as they have expressed radically different opinions before the courts, and the courts differ in their judgments.

A good deal of manipulated wine is understood to go to the United States.

PHYLLOXERA.

During the past summer various gardens in this vicinity, on the other side of the Rhine, in the direction of the famous Rhinegau, were found to be infected with the phylloxera. The discoveries made led to consternation among the owners of the vineyards near here, for this is a new region of infection and much nearer the valuable and celebrated vineyards of the Rhine.

The discovery of new batches of the pest led to prompt and energetic measures to stamp out the marauder, and fine fruit trees and rose bushes and valuable plants, by reason of their proximity to infected spots, had to succumb to the inexorable law which requires every growing thing within a certain distance of the infected vines to be completely destroyed. Then the stricken places are disinfected with petroleum and coal containing sulphur.

For a number of years past small batches of phylloxera have been discovered in the Rhineland, below Coblenz, and it was thought that the insects' seat was confined to a small and well known district of country, in which it could be successfully fought. In 1885 and 1886 a very thorough examination was made of the vineyards of Rhenish Prussia, as reported in my dispatch No. 254, of November 2, 1886, and the conclusion was arrived at, in consequence of that investigation, that no phylloxera probably existed except in the localities where the insects were known to have ravaged, that is, a district of about 25 kilometers (15½ miles) in the valley of the Rhine, and one of about 8 kilometers in the valley of the Ahr.

In 1886 a number of small batches were discovered in the valley of the Ahr and along the Rhine, in the neighborhood of Linz and Ockenfels, which were conjectured to be stragglers from the neighboring-main batches. On the whole, 17 new infected spots were discovered in the valley of the Ahr up to April, 1887, namely, 11 at Lohrsdorf

and 6 at Heimersheim; and on the right bank of the Rhine 20, namely, 14 at Ockenfels, 3 at Lenz, 1 at Linzhausen, and 2 at Leubsdorf.

The number of vines affected amounted in the valley of the Ahr to 146 in 1886, against 634 in 1885, and on the right bank of the Rhine to 140, against 2,076 in 1885.

The cost of fighting the phylloxera in Prussia in 1885–'86 amounted to 448,000 marks (about $125,000).

The vineyards of Germany lie too far to the north, it is thought, for the phylloxera to develop to the extent it did in France and cause the devastation it there inflicted, and the vines of the Rhine seem to resist the insect better than those of France, and besides are better looked after and manured, I am told, than those of France.

The stamping out of the phylloxera is attended with a great deal of expense, and accompanied by the complete destruction of the vineyards where it is discovered, which are kept bare for a certain period of time. The vineyard owners are not disposed to see their valuable vineyards lie idle in this way for a series of years, and in view of the expense attending the annihilation of the phylloxera and the opposition to heroic measures on the part of the proprietors of the infected vineyards, it is very likely that if the phylloxera should appear in force in the Rhinegau, some other course of action than complete destruction of valuable stock, which it would require years to repair, will be adopted.

PERONOSPORA.

On the Moselle they have been having a good deal of trouble with what is known as the peronospora viticola, a species of grape-vine mildew, and much damage has been caused thereby.

CHAMPAGNE.

German champagne, or sparkling wine, is said to be constantly finding an enlarged market, chiefly at home. England and its colonies, which formerly formed the chief market for this product, make now a light call for it.

MISCELLANEOUS.

PATENTS.

The German patent law has long been in need of a thorough reform, and the Government is now busy with the task of overhauling it. To what extent this will be done is difficult to say. The present law was passed in May, 1887, and has given rise, with the regulations thereunder, to a good deal of complaint from inventors and applicants for patents, on the ground of want of practicality, vexatious requirements, high fees, insufficient protection of patent rights, and lack of expert practical men as examiners in the Imperial patent office.

In 1886 there were 9,991 applications for patents, 4,008 patents granted, and 3,808 extinguishments, making 11,249 patents in all still good. In the eleven years, 1876–1886, there have been 73,576 applications for patents, 38,569 issued, and 27,336 extinguished. Of trade-marks there have been 581,164 registered during the same period.

PRIVATE POST.

Some surprise was created about a year and a half ago by the inauguration at Berlin of a private postal system, in opposition to that of the Government. Meeting with success in Berlin, the enterprise quickly spread to other cities, and I suppose I am justified in saying that nearly every city of any size in the Empire has at present its private post. This carriage of the mail, however, is local in its operation, and can not extend from one city to another. Mail matter is taken by the postal companies at lower rates than by the Government, but is understood not to be so reliably and promptly delivered. It is rather singular that the Imperial Government allows anything of the kind.

At Mayence the private post went into operation on the 15th of November, 1886, and from that date to April 15, 1887, or in a period of five months, had delivered in the city 98,530 letters and postal-cards.

EXHIBITION OF DEVICES AGAINST ACCIDENTS.

Preparations are being made for the holding of an exhibition at Berlin of all kinds of devices for the protection of working people from accident.

DANUBE-MAIN CANAL.

One of the projects talked about, but not yet seriously contemplated, is the construction of a canal to connect the river Main with the Danube. A canal such as is thought of would afford a waterway from the North Sea to the Black Sea.

The idea is to bind Frankfort-on-the-Main with the Danube by means of a canal navigable by river steamers. Frankfort is already in communication with the Rhine by means of a canal thrown open last year to navigation, which enables the large vessels of the Rhine to ascend the Main as far as Frankfort and give direct intercourse between that city and the mouth of the Rhine.

By continuing this canalization above Frankfort, and improving the water-ways from the Main to the Danube, an uninterrupted water-course could be obtained from the North Sea to the Black Sea, which would be of great advantage, not only to German commerce with Austria—provided the latter did not impede it by restrictions or impositions on navigation—but to the domestic trade of the German Empire itself. The industries of Western Germany would obtain a larger market and be enabled to successfully compete with rivals now better situated, and the farms and forests of Southern Germany have a cheap way for their products thrown open to them, and receive in exchange, in the same way, the commodities of the western part of the Empire. It would place the iron regions of one part of the Empire in easy trade relations with the agricultural and forestal products of another. But no careful estimate is understood to have yet been made of the cost of such an undertaking, and the expense of the enterprise may forbid its execution.

JAS. HENRY SMITH,
Commercial Agent.

U. S. COMMERCIAL AGENCY,
MAYENCE, *January* 6, 1888.

ECONOMIC CONDITION OF ITALY.

REPORT OF CONSUL-GENERAL ALDEN.

POPULATION.

On the 31st of December, 1886, the estimated population of Italy was 29,943,607, showing an increase since December 31, 1885, of 582,575.

As the following statement shows, there was in 1886 a slight decrease in the birth rate, and an increase in the death rate. The latter, and perhaps to some extent the former, was doubtless due to the severe cholera epidemic of 1886.

STATEMENT No. 1.—*Population of Italy for the years ending December* 31, 1885, *and December* 31, 1886.

Details.	1885.	1886.
Total population	27,699,785	29,943,607
Marriages	233,931	233,099
Births (not including still-births)	1,125,970	1,087,360
Deaths (not including still-births)	787,217	843,538
Marriages (per 1,000)	7.88	7.78
Births (per 1,000)	37.91	36.31
Deaths (per 1,000)	26.51	28.17

AGRICULTURE.

There has been a marked improvement in the agriculture of Italy in the year 1886. In nearly all the crops there was in that year a decided increase, and in some of them, especially the wine and lemon crops, the increase was very large. The following statement shows the condition of the crops in 1886 as compared with 1885.

STATEMENT No. 2.—*Italian crops in* 1885 *and* 1886.

Articles	1885.		1886.	
	Total quantity.	Per centage of ordinary crop.	Total quantity.	Per centage of ordinary crop.
Wheat.....bushels..	118,265,419	81.87	112,950,989	83.79
Indian corn.....do....	79,906,728	90.32	77,596,683	91.80
Barley.....do....	8,687,691	77.39	8,951,840	79.73
Rye.....do....	4,102,811	78.78	4,250,347	81.64
Rice.....do ..	18,699,797	89.55	20,500,732	98.73
Wine.....gallons..	509,642,124	67.00	938,517,963	101.13
Olive oil.....	47,085,660	56.39	68,860,269	77.64
Oranges, lemons, and citrons.....number..	2,261,560,000	73.86	3,002,223,737	80.15
Chestnuts.....pounds..	784,332,305	90.87	710,348,354	82.80
Silk cocoons.....do....	71,146,567	.....	91,281,097	.....
Oats.....bushels..	15,743,521	83.50	14,761,822	78.56
Peas, beans, and lentils.....do....	4,233,326	74.65	4,705,835	82.97
Fave, lupins, and chick-peas.....do....	9,322,923	77.10	.....	70.89
Potatoes.....pounds..	1,651,162,508	84.52	1,552,906,130	79.49
Flax.....do....	33,509,920	76.94	34,466,716	78.72
Hemp.....do....	160,907,670	85.60	170,677,817	90.81
Tobacco.....do....	13,519,309	.....	11,658,144	.....
Clover, etc.....do....	19,283,700,122	.....	15,262,533,377	.....
Grasses.....do....	18,324,110,725	.....	18,615,222,856	.....
Hay.....do....	14,542,247,989	.....	15,480,301,559	.....

It should be remarked that the figures showing the total amount of the wine crop, although published officially, have been collected by telegraph and may undergo some slight change when revised by the proper authorities.

The peronospora has apparently not inflicted very much injury to the vines, as it has been successfully fought by treating the vines with lime. Of the phylloxera little has been said in the public prints during the last year, and no official statistics for that year are attainable.

FISHERIES.

An increase in the number of men and boats engaged in the Italian fisheries in 1886 is to be noticed. There were thus employed in 1885, 49,728 men and boys, and 16,851 vessels and boats of 49,182 tons in the aggregate. In 1886 there was an increase of 647 in the number of vessels, and the aggregate tonnage was increased by 1,328 tons. The men and boys employed were 1,006 more in 1886 than in 1885.

Of the Italian fishing fleet 195 vessels were employed in 1886 in the coral fisheries; 45 in the sponge fisheries, and the remainder in fisheries proper. It is in the latter fisheries that there has been an increase, for the number of vessels employed in the coral and sponge fisheries have decreased.

MINES.

The statistics of Italian mines are always late in publication, and the latest that are attainable are those of 1885. They are as follows:

STATEMENT No. 8.—*Italian mines and their products.*

Character of mines.	Number of mines.	Miners employed.	Ore extracted.	Value.
			Tons.	
Iron	41	1,659	200,955	$410,180
Copper	12	1,246	27,380	305,050
Zinc	19	1,119	27,410	218,506
Lead	19	2,480	22,028	634,655
Lead and zinc	21	5,455	*18,156 †82,477	480,095 1,066,606
Gold	22	464	11,106	96,201
Silver	4	1,295	1,485	378,741
Manganese	4	66	1,802	10,898
Antimony	10	274	2,887	77,388
Quicksilver	2	340	237	169,257
Iron pyrites	6	225	11,372	30,887
Rock salt	24	596	17,204	59,403
Coal, lignite, etc	23	1,821	190,413	291,005
Sulphur	374	32,927	425,547	6,747,076
Boracic acid	12	564	1,761	182,431
Petroleum	4	136	270	21,242
Bitumen	1	488	13,728	59,208
Mixed minerals, copper, zinc, and lead	4	204	1,550	15,903
Salts of springs	2	219	10,678	55,608
Alum	1	93	6,000	34,740
Graphite	8	120	4,000	34,740

*Lead. †Zinc.

A decrease in the quantity of quicksilver and an increase in the quantity of sulphur mined in 1885, as compared with 1884, are the only points that are noticeable in the Italian mining statistics of the year 1885. The number of mines, their product, and the number of miners employed are very nearly the same as those mentioned in the last annual report from this office.

FORESTS.

In my report on forestry in Italy, contained in my dispatch No. 119, dated January 25, 1887, to which I beg leave to refer, the extent of Italian forests and the natural-forest laws were fully set forth. The following tables, taken from that report, show the extent of Italian forests in 1886, and the character of the trees in those of the State forests which are by law declared to be inalienable.

STATEMENT No. 4.—*Extent of forests in Italy.*

Provinces.	Extent in acres.
Piedmont	1,100,000
Lombardy	1,100,000
Venetia	1,200,000
Liguria	500,000
Emilia	550,000
Marches and Umbria	1,000,000
Tuscany	70,000
Salerno	500,000
South Adriatic provinces	1,200,000
South Mediterranean provinces	2,000,000
Sicily	350,000
Sardinia	800,000
Total	10,270,000

STATEMENT No. 5.—*Character of trees composing the inalienable State forests.*

Trees.	Per cent.
Resinous trees	31
Oak	29
Beech	25
Chestnut	1
All others	14

The annual revenues which the State receives from alienable and inalienable forests are about $202,533, and the approximate annual expenses, including laying out of roads and building bridges, are about $344,685, of which $165,600 is paid by the National Government and the remainder by provinces and communes.

EDUCATION.

The number of persons in Italy who can not read or write decreases steadily, and in 1881 the number of such persons (of six years of age and upwards) was 61.94 per cent. No census has been taken since 1881, and, although no accurate estimate of the percentage of illiteracy to-day can be made, it is safe to say that the percentage can not be larger than 57, and may be much smaller.

In the scholastic year 1883–'84 there were in the Italian elementary schools, including infant asylums, 2,577,562 pupils, or 142,250 more than were present at those schools during the preceding scholastic year. Of these 2,577,562 pupils, 1,439,112 were males, and 1,138,450 were females. No statistics of the elementary schools later than those above given are attainable.

The statistics for the secondary schools for the scholastic year 1884–'85 (a year later than the statistics of the elementary schools) show that 94,774 pupils were then attending such schools. The following statement gives in full the statistics of the secondary schools:

STATEMENT No. 6.—*Italian secondary schools in* 1884–'85.

Schools.	Number of schools.	Pupils.
Classical schools.		
Gymnasia:		
Government	128	15,262
All other	611	30,743
Total	739	46,005
Lyceums:		
Government	96	7,536
All other	240	6,232
Total	336	13,768
Technical schools.		
Technical schools:		
Government	80	9,228
All other	348	17,398
Total	428	26,626
Technical institutes:		
Government	45	5,612
All other	28	1,945
Total	73	7,557
Mercantile marine institutes:		
Government	20	739
All other	4	79
Total	24	818
Grand total	1,600	94,774

Statements Nos. 7 and 8 show the number of pupils attending the universities and those receiving special instruction during the scholastic year 1884–'85.

STATEMENT No. 7.—*Italian universities, superior institutes, and special schools in* 1884–'85.

	Number of institutions.	Pupils.
Universities:		
Government	17	13,958
Free	4	271
Total	21	14,229
University schools annexed to lyceums		40
Superior institutes	11	1,715
Superior special schools	10	607
Grand total	42	16,591

STATEMENT No. 8.—*Special teaching during the scholastic year* 1884–'85.

	Number of schools.	Pupils.
Government schools of fine arts	14	3,986
Government musical schools	6	832
Military schools	11	3,591
Naval Academy	1	207
Engineers (Naval) Academy	1	142
Agricultural schools and colonies	44	1,147
Mining schools	4	92
Industrial and commercial schools	156	20,923
Total	237	29,920

If we estimate that in the scholastic year 1884–'85 there were in the Italian elementary schools 2,600,000 pupils, which is a moderate estimate in view of the usual annual rate of increase, the whole number of persons receiving instructions in the Italian universities and schools in 1884–'85 was in round numbers 2,741,000.

CRIME.

No official statistics as to crime in Italy, in the year 1886, have been published or are in any way attainable.

EMIGRATION.

The increase of emigration from Italy during 1886 was about the same in numbers, though proportionally smaller than the increase in 1885. In the latter year 157,193 persons emigrated from Italy, being 10,176 more than in the preceding year. In 1886 the whole number of emigrants was 167,829, being 10,636 more than in 1885.

There was, however, in 1886 a large increase of emigration to the United States, and corresponding decrease of emigration to South America. In 1885 the emigrants to the United States numbered 12,485. In 1886 the number was 26,920, or more than double that of the preceding year. In 1885 the emigrants to South America were 59,394, while in 1886 the number decreased to 53,032. This, too, in spite of the fact that both Brazil and the Argentine Republic offer inducements to immigration by either providing immigrants with land or by assisting them to pay their passage from Italy.

A slight diminution of the number of emigrants to Africa is also to be noted and is to be accounted for by the unsettled state of things in Egypt. Emigration to Tunis, however, slightly increased in 1886. The following statement gives the number and destination of emigrants from Italy in 1885 and 1886:

STATEMENT No. 9.—*Emigration from Italy in* 1885 *and* 1886.

Destination.	1885.	1886.
Canada	611	1,720
United States	12,485	26,920
Mexico and Central America	.....	494
Total emigration to North America	13,096	29,134
Argentine Republic	37,710	36,534
Uruguay	1,497	1,202
Paraguay	847	847
Brazil	12,311	11,334
Other American countries	7,029	3,315
Total emigration to South America	59,394	53,032
Total emigration to North and South America	72,490	82,166
Algiers	3,423	2,243
Egypt	1,194	740
Tunis	818	1,557
Other African countries	782	424
Total emigration to Africa	6,217	4,964
Asia	96	62
Oceanica	158	231
Total emigration to non-European countries	78,961	87,423
Emigration to European countries	78,232	80,406
Grand total	157,193	167,829

RAILWAYS.

A few statistics of Italian railways for the year ending June 30, 1887, together with those for the year ending June 30, 1886, have been published, though at the date of the last annual report from this office no statistics later than December 31, 1884, were accessible. No complete statistics have been published since 1884. During the year ending June 30, 1887, the length of the railways in Italy was 7,265 miles, being 439 more miles than the statistics of the preceding year showed.

The following statement shows the length of Italian railways in 1886 and 1887:

STATEMENT No. 10.—*Length of railways in Italy during the years ending June 30, 1886, and June 30, 1887.*

Companies.	1886.	1887.
	Miles.	*Miles.*
Mediterranean	2,718	2,854
Adriatic	2,834	2,968
Sicilian	404	419
Sardinian	257	257
All others	613	767
Total	6,826	7,265

The foregoing constitute all the statistics in regard to the construction of Italian railways that have been published since those of 1884. Some facts as to these railways at the present time are notorious. Among these is the obvious deficiency in rolling stock. The trains are constantly overcrowded, and it is by no means uncommon for third-class passengers to be crowded into the first-class cars, owing to the lack of third and second-class cars. This deficiency is sufficiently inconvenient to travelers, but the gravest fact in regard to it is that, in case of the sudden mobilization of the army, the railways would be unequal to the task imposed upon them.

New roads are constantly being constructed. Among these are a new line between Rome and the Adriatic, by way of Subiaco, Sulmona, and Pescara; a new line connecting Florence with Bologna and Ancona, by way of Faenza; a line from Spezia to Parma, and a narrow-gauge line from Arezzo to Gubbio and thence to a junction with the Foligno-Ancona road. The latter line—Arezzo-Gubbio—is now open, and the others will be open in from one to two years.

By the law of April 27, 1885, the Government leased most of the Italian railways to three great companies—the Mediterranean, the Adriatic, and the Sicilian. The Sardinian railways, and about 1,240 miles in all of railways on the main-land, are still operated by small companies. Most of the railway lines on the main-land are divided nearly equally between the Mediterranean and Adriatic companies.

The expenses of operating these railways have not been published since 1884. The receipts of the three great companies during the fiscal year 1887 are given below.

STATEMENT No. 11.—*Receipts of the Mediterranean, Adriatic, and Sicilian railway companies during the year ending June 30, 1887.*

Receipts.	Mediterranean.	Adriatic.	Sicilian.	Total.
Passengers	$8,502,506	$6,803,918	$691,172	$15,997,596
Luggage	410,575	306,919	14,497	731,989
Express freight	2,073,116	2,107,419	66,457	4,246,972
Ordinary freight	10,539,521	8,724,171	722,778	19,986,470
All other receipts	161,417	294,009	15,793	471,219

TRAMWAYS.

The following statement shows the length of Italian tramways in 1884 and 1885. No later statistics can be obtained:

STATEMENT No. 12.—*Length of steam tramways in Italy in* 1884 *and* 1885.

Provinces.	Length in miles.	
	1884.	1885.
Piedmont	403¾	445½
Lombardy	488	486¾
Venetia	66	101
Emilia	91½	108½
Tuscany	57½	57½
Rome	33	33
Campania	20	28
Puglie	40¾	46
Total	1,150¼	1,301

The increase of steam tramways in Italy has not been as great during the year 1885 and since then as was anticipated, since it is generally supposed that in time they will be placed under the general railway law, the effect of which would be to lessen their profits. Until the Government takes final action on this subject investors will remain cautious as to investing in the building of new lines.

TELEGRAPHS.

No statistics as to Italian telegraphs later than June 30, 1886, are attainable. The following statement shows the length of lines, the number of offices and employés, etc., on that date:

STATEMENT No. 13.—*Italian telegraphs on June* 30, 1886.

Length of wires	miles..	66,723
Length of lines	do....	18,768
Length of submarine lines	do....	116
Offices	number..	3,539
Employés	do....	6,483
Semaphoric offices	do....	31
Apparatus in use:		
Morse	do....	4,145
Hughes	do....	87
Batteries (number of cells)		136,995

The statistics as to telegraphs given in the last annual report from this office were for the year 1884, which were the latest that could be

obtained. Since that date and until June 30, 1886, the following increase in the length of lines, number of offices, etc., has taken place:

STATEMENT No. 14.—*Increase in extent of Italian telegraphs from December 31, 1884, to June 30, 1886.*

Increase in—		
Length of wires	miles..	2,297
Length of lines	do....	521
Length of submarine lines	do....	
Number of offices		312
Number of employés		525
Number of semaphoric offices		1
Apparatus used		2,205

The number of dispatches sent over the wires in 1884 and 1885 (no later statistics attainable) were as follows:

STATEMENT No. 15.—*Telegraphic business in Italy in 1884 and 1885.*

Description.	1884.	1885.
Private dispatches sent within the Kingdom	5,652,278	5,896,306
Private dispatches sent to other countries	568,271	581,657
Government dispatches sent	456,303	469,974
Dispatches received from abroad	664,501	687,423
Dispatches in transit	174,937	179,036
Total	7,516,290	7,814,396
Deduct		7,515,290
Increase in 1885		298,106

The expenses of the Italian telegraphs in 1885 were $2,113,629, being $92,719 more than in 1884; and the receipts in 1885 were $2,477,430, being $85,414 more than in 1884. The total expenses in 1884 were $2,020,911, and the total expenses in 1885 were $2,113,629.

POSTS.

Statement No. 16 shows the number of letters, papers, packages, etc., carried by the Italian post-office during the year ending June 30, 1886, compared with the year ending June 30, 1885.

STATEMENT No. 16.—*Italian postal operations during the fiscal years ending June 30, 1885 and June 30, 1886.*

Description.	1885.	1886.
Letters and manuscripts carried	159,678,226	162,976,598
Postal cards carried	35,521,098	40,659,077
Newspapers and samples carried	173,250,108	179,094,704
Postal packages carried	4,542,132	4,775,127

The increase in the number of newspapers carried was more marked than the increase in the number of letters. This increase, as well as the increase in the entire post-office business, is influenced not merely by the ordinary causes which produce such results, but by the rapid diminution in Italy of the proportionate part of the population which is unable to read or write.

The following statements show the extent of the postal order and the postal savings-bank business in the fiscal years 1885 and 1886:

STATEMENT No. 17.—*Postal orders issued and paid in Italy during the years ending June 30, 1885, and June 30, 1886.*

Year.	Postal orders issued.		Postal orders paid.	
	Number.	Value.	Number.	Value.
1885	4,542,132	$106,136,792	4,963,591	$113,502,658
1886	4,752,363	94,838,223	5,153,194	101,278,578

STATEMENT No. 18.—*Italian postal savings-banks.*

Business done.	Fiscal year 1885.	Fiscal year 1886.
Bank-books issued	285,372	306,892
Bank-books canceled	93,766	117,188
Deposits	1,743,588	1,875,079
Deposits withdrawn	883,311	985,403
Amount of deposits, including interest	$27,500,497	$31,468,984
Amount of deposits withdrawn	23,079,472	24,767,651

The receipts and expenses of the Italian post-office in the fiscal year ending June 30, 1886, are given below. The detailed items of expenses can not be obtained.

STATEMENT No. 19.—*Receipts and expenses of the Italian post-office for the years ending June 30, 1885, and June 30, 1886.*

Description.	1885.	1886.
Stamps for letters sold	$5,338,164	$5,077,330
Stamps for packages sold		535,561
Postal cards sold	720,025	777,001
Stamps for marking short-paid letters	671,755	691,014
Miscellaneous receipts	625,578	652,079
Total	7,355,522	7,732,985

Expenses.

Total expenses in 1885	$6,408,452
Total expenses in 1886	6,575,289
Increase in 1886	166,837
Excess of receipts over expenses in 1885	947,070
Excess of receipts over expenses in 1886	1,157,696

No change has been made in the rates of postage by the Italian post-office since the last annual report from this office.

THE ARMY.

The strength of the Italian army on the 1st of June, 1887, was as follows:

Description.	Officers.	Privates.	Total.
Permanent army with the colonies	13,864	272,025	285,889
Permanent army on unlimited furlough	9,814	620,768	630,582
Total	23,678	872,793	896,471
Mobile militia (landwehr)	2,898	377,010	371,908
Territorial militia (landsturm)	5,402	1,308,391	1,313,793
Total	31,978	2,558,794	2,590,172
Total in 1885			2,113,969
Increase			476,203

The increase is apportioned as follows:

Permanent army	145,706
Mobile militia	38,658
Territorial militia	291,839

By the law of the 10th of July, 1887, a special corps of volunteers for service in Africa was created. This corps consists of 5,000 officers and men. The men were taken from the permanent army, and represent, both individually and in their organization, nearly every arm of the service. They are already at their post in Massowah and its neighborhood, thus raising the Italian force in that region to 18,000 men. The battle of Dogali, where 500 Italian troops who had been sent from Massowah to relieve a garrison besieged by the Abyssinians fought with desperate bravery, has shown of what material the Italian army is composed. These men, attacked by a force of Abyssinians variously estimated at from 12,000 to 20,000 men, had no thought of attempting a retreat, but stood their ground, hoping that before they could be exterminated they could give the Abyssinians a lesson which would deter them from storming the beleaguered garrison. Of the whole number 417 died on the field, and only 83, of whom but one was without a wound, escaped. The dead were found lying in ranks as if they had fallen on parade, and the survivors related that when toward the last but a dozen men were left, the colonel in command ordered them to present arms in honor of the dead before dying themselves. This heroic sacrifice was not in vain, for the Abyssinians suffered such a terrible loss that they withdrew from the siege of the threatened town the next day.

It has been said by hostile critics of the Italian army that although the North Italians make good soldiers, the Italian army is weakened by the presence of the South Italian recruits. Of the heroes of Dogali, fully one-half were natives of the old Neapolitan Kingdom. They have silenced the sneering assumption that the soldiers of the South are one whit inferior to their brethren of the North.

NAVY.

The following statement shows the number and character of the vessels of the Italian navy on January 1, 1887, which were afloat:

STATEMENT No. 20.—*Italian naval vessels afloat on January* 1, 1887.

Class.	Number.			Material of hull.					Tonnage.	Indicated horse-power.	Guns.			Crew.	
	Armored.	Not armored.	Total.	Iron.	Steel.	Iron and steel.	Of wood. Exclusively.	Of wood. Partly.			Breech-loading.	Muzzle-loading.	Total.	Officers.	Men.
Fighting ships.															
First class	11	....	11	5	1	2	....	3	72,221	56,527	8	81	89	285	4,865
Second class	5	8	11	3	4	....	4	....	28,032	29,408	46	34	80	183	2,748
Third class	....	15	15	6	6	....	3	....	12,437	19,064	54	4	58	109	1,412
Transport and supply ships.															
First class	....	4	4	1	1	....	2	....	*9,675	6,077	4	13	17	48	650
Second class	....	4	4	4	....	....	....	....	4,008	2,101	....	8	8	36	370
Third class	....	9	9	5	....	....	4	....	†2,977	1,629	....	10	10	17	365
School ships	....	3	3	....	....	....	2	1	‡12,424	3,743	10	26	36	72	918
Vessels for local service	....	19	19	8	....	....	11	....	2,540	2,240	4	16	20	15	530
Side-wheel lagoon batteries	....	6	6	6	....	....	....	....	528	390	....	....	....	6	66
Sea-going torpedo vessels	....	3	3	....	3	....	....	....	203	3,000	....	....	....	6	45
Coast torpedo vessels.															
First class	....	32	32	....	32	....	....	....	§1,098	12,040	....	....	....	32	320
Second class	....	21	21	....	21	....	....	....	309	4,050	....	....	....	21	189
Torpedo launches	....	2	2	....	....	....	2	....	22	300	....	....	....	2	18
Total	14	126	140	38	68	2	28	4	149,472	140,569	126	192	318	832	12,496

* Tonnage and horse-power of one transport not included.
† Tonnage and horse-power of one supply ship not included.
‡ Tonnage and horse-power of one school ship not included.
§ Tonnage and horse-power of one torpedo vessel not included.

STATEMENT No. 21.—*Total vessels of the Italian navy afloat and in construction on January* 1, 1887.

Class.	Number.			Material of hull.					Tonnage.	Horse-power.
	Armored.	Not armored.	Total.	Iron.	Steel.	Iron and steel.	Of wood. Exclusively.	Of wood. In part.		
Fighting ships:										
First class	18	....	18	5	8	....	....	3	162,227	150,127
Second class	3	12	15	3	8	....	4	....	42,367	60,208
Third class	....	23	23	6	14	....	3	....	19,083	39,864
Transport and supply ships:										
First class	....	4	4	1	1	....	2	....	*9,635	6,077
Second class	....	4	4	4	....	....	....	....	4,008	2,101
Third class	....	11	11	5	2	....	4	....	†4,073	2,489
School-ships	....	3	3	....	....	....	2	1	‡12,424	3,743
Vessels for local service	....	21	21	10	....	....	11	....	2,664	2,460
Side-wheel lagoon batteries	....	6	6	6	....	....	....	....	528	390
Torpedo dispatch vessels	....	2	2	....	2	....	....	....	634	5,600
Sea-going torpedo vessels	....	47	47	....	47	....	....	....	§3,958	47,800
Coast torpedo vessels:										
First class	....	38	38	....	38	....	....	....	1,302	16,800
Second class	....	21	21	....	21	....	....	....	§3,095	4,050
Steam torpedo launches	....	2	2	....	....	2	....	....	22	300
Total	21	194	215	40	141	2	28	4	266,020	342,009

* Tonnage and horse-power of one transport not included.
† Tonnage and horse-power of one supply-ship not included.
‡ Tonnage and horse-power of one school-ship not included.
§ Tonnage and horse-power of one torpedo vessel not included.

Among the vessels added to the Italian navy during the year 1886 should be mentioned the transport and torpedo dispatch vessel *America* and the cruiser *Dogali*. The former originally belonged to the National Steamship Company, and was famous for her fast passages between New York and Queenstown. The *Dogali* was built for the Italian Government at Newcastle, England, and has shown a speed of 19¾ knots over the measured mile. The Italian navy has now afloat eight vessels having a speed of 18 knots and over per hour.

During the naval maneuvers near Leghorn last summer the Italian fleet, comprising the largest iron-clads, steamed past the Royal yacht in close order at a speed of 12 knots per hour. The vessels were admirably handled, and were steered with perfect ease. On the other hand, at the great English naval review at Spithead last summer, the vessels had to be limited to a speed of 7 knots, and the difficulty of steering the large iron-clads was emphasized by two serious collisions which occurred during the week of the maneuvers.

The Italian naval maneuvers were brilliantly successful, and from first to last not one accident of any kind occurred.

The following statement shows the number of officers and men belonging to the Italian navy on the 31st of December, 1886:

STATEMENT No. 22.—*Officers and men belonging to the Italian navy on December 31, 1886.*

Service.	Officers.	Men.	Total.
In active service and on leave	1,065	.....	1,065
In active service	.....	10,270	10,270
On unlimited leave	.....	25,524	25,524
Total	.....	35,794	36,859
Naval reserve	.....	5,090	5,090
Grand total	1,065	40,884	41,949

BOOKS.

The following statement shows the number and class of books and periodicals published in Italy in 1886, exclusive of newspapers:

STATEMENT No. 23—*Italian publications in* 1886.

Class.	Number.	Class.	Number.
Bibliography	91	Politics, social science	443
Encyclopædias	2	Physical sciences	348
Philosophy, theology, and religion	1,071	Medicine	808
Education	1,091	Engineering	319
History and geography	631	Military and naval	234
Contemporary biography	463	Fine arts	234
Philology and history of literature	375	Agriculture, industry, and commerce	1,126
Poetry	355	Laws and statutes, etc	1,717
Romances and novels	348	Miscellaneous	314
Dramatic works	228		
Jurisprudence	423	Total	10,621

The number of publications of all kinds in 1885 was 6,908, or 3,713 less than in 1886. Twenty-four new journals were established in 1886.

COINAGE.

STATEMENT No. 24.—*Money coined by the Italian Government in* 1885–1886.

Year.	Gold.	Silver.	Bronze.	Total.
1885	$169,165	$134,626	$9,650	$313,338
1886	227,776	2,006,776	19,300	2,253,846

Of the money coined in 1886 $1,795,373 were 1 and 2 franc pieces coined from 50 centime pieces recalled from circulation. The bronze money coined in the same year consisted of 1 and 2 centime pieces coined from 10 centime pieces recalled from circulation.

NAVIGATION.

Statement No. 25 shows the entries and clearances at Italian ports in 1885 and 1886.

STATEMENT No. 25.—*Entries and clearances at Italian ports in* 1885 *and* 1886.

	Entered.				Cleared.			
	1885.		1886.		1885.		1886.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
International commerce.								
Sailing vessels:								
Italian	8,910	711,976	8,341	697,337	8,374	628,234	8,036	717,681
Foreign	2,612	437,399	2,150	346,618	2,665	418,375	2,180	341,851
Steamers:								
Italian	937	741,447	983	799,666	888	695,427	964	764,508
Foreign	4,453	4,012,160	4,594	4,263,146	4,384	3,856,937	4,642	4,308,305
Total:								
Italian	9,847	1,453,423	9,324	1,497,003	9,262	1,393,661	9,000	1,482,189
Foreign	7,065	4,449,559	6,744	4,609,764	7,049	4,275,312	6,822	4,650,156
Total	16,912	5,902,982	16,068	6,106,767	16,311	5,668,973	15,822	6,132,345
Coasting trade.								
Sailing vessels:								
Italian	74,057	2,328,857	70,961	2,361,232	74,006	2,253,922	71,158	2,314,189
Foreign	347	71,806	352	82,457	187	44,881	213	47,465
Steamers:								
Italian	17,773	6,834,338	17,917	7,135,867	17,797	6,820,756	17,817	7,079,768
Foreign	3,962	3,303,325	3,254	2,974,950	4,033	3,469,888	3,191	2,852,802
Total:								
Italian	91,830	9,163,195	88,898	9,497,099	91,803	9,174,678	88,975	9,393,957
Foreign	4,309	3,375,131	3,606	3,057,407	4,220	3,514,769	3,404	2,900,267
Total	96,139	12,538,326	92,504	12,554,506	96,023	12,689,447	92,379	12,294,224

SUMMARY.

	Vessels.	Tons.
Total entries and clearances in 1885	225,385	36,799,728
Total entries and clearances in 1886	216,773	37,087,842
Difference in 1886	— 8,612	+ 288,114

STATEMENT No. 26.—*Entries and clearances at all Italian ports of vessels exclusively engaged in the deep-sea fisheries in* 1885 *and* 1886.

Year.	No.	Tonnage.
1885	2,869	20,334
1886	2,605	20,607
Difference in 1886	— 264	+ 273

STATEMENT No. 27.—*Entries, clearances, and tonnage of vessels under foreign flags for the year ending December* 31, 1886.

Flags.	1885.		1886.	
	No.	Tonnage.	No.	Tonnage.
English	9,717	9,043,346	9,879	9,415,598
French	4,621	3,418,901	3,768	2,770,230
German	1,010	495,462	1,160	971,926
Austrian	2,850	610,674	1,300	372,212
Greek	1,769	491,636	2,035	365,373
American	51	29,170	23	19,712
All other foreign flags	2,643	1,225,582	2,411	1,301,526
Total	22,643	15,614,771	20,576	15,217,594
Difference in 1886			— 2,067	— 397,177

STATEMENT No. 28.—*Number and tonnage of American vessels entering and clearing at the five principal Italian ports in* 1885 *and* 1886.

Ports.	1885.						1886.					
	Arrivals.		Departures.		Total.		Arrivals.		Departures.		Total.	
	No.	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*	*No.*	*Tons.*
Catania	2	1,309	1	578	3	1,827						
Genoa	5	4,340	5	4,340	10	8,680	1	1,940	1	1,940	2	1,880
Messina	1	525			1	525	1	350	1	350	2	700
Palermo	2	742	2	742	4	1,484	1	562	1	562	2	1,124
Savona	3	713	2	713	4	1,426	1	465	1	465	2	930
Total	12	7,629	10	6,313	22	13,942	4	3,317	4	3,317	8	4,634

Decrease in 1886 in the number of vessels arriving and clearing, 14.
Decrease in 1886 in the number of tons arriving and clearing, 3,713.

In the year 1885 there had been an increase of 4 in the number of entries and clearances, and of 3,542 in the number of tons entered and cleared.

Statement No. 29 shows the flags under which trade was carried on between Italy and the United States in 1886.

STATEMENT No. 29.—*Flags under which trade with the United States and Canada was carried on in* 1886.

Flags.	Entered.			Cleared.		
	No. of vessels.	Tonnage.	Freight.	No. of vessels.	Tonnage.	Freight.
With cargoes:			*Tons.*			*Tons.*
Italian	169	131,508	121,031	200	145,664	88,183
America	8	6,553	10,356	6	8,443	4,175
Austrian	9	5,708	6,866	12	8,485	2,461
French	9	17,979	6,725	7	14,753	2,674
German	3	1,824	2,260	10	18,807	14,099
English	93	59,428	58,675	232	263,044	252,008
All others	17	9,438	10,336	21	16,418	8,034
Total	308	232,438	216,249	488	470,614	378,634
In ballast:						
America						
Italian	2	1,849		39	28,374	
All others	4	4,846		51	41,308	
Total	6	6,195		90	64,682	
Grand total	314	238,633	216,249	578	535,296	378,634

In the year 1885, the number of tons of freight entered and the number of tons of freight cleared at Italian ports by vessels trading with the United States and Canada were, respectively, 218,165 and 305,591. There has thus been a decrease of 1,916 tons in the quantity entered, and an increase of 73,043 in the quantity cleared.

On the whole the foregoing figures show little change in Italian commerce in 1886 as compared with 1885. The decrease in the number of vessels entered and cleared at Italian ports is accompanied by an increase in the number of tons so entered and cleared, which is explained by the modern tendency to build large ships. The decrease in the entries and clearances of foreign ships and also of the tons of freight carried by them is the result to some extent of the system of bounties and subsidies for Italian vessels recently adopted by the Italian Government.

MERCANTILE MARINE.

Statement No. 30 shows the number, tonnage and value of merchant vessels launched in Italy in 1885 and 1886.

STATEMENT No. 30.—*Number, tonnage, and value of merchant vessels launched in* 1885 *and* 1886.

Years.	Ship-yards where vessels were launched.	Vessels.	Tonnage.	Value of hull, including machinery of steamers.	Average value.
1885	39	197	10,728	$564,825.00	$2,873.50
1886	43	193	12,030	337,192.00	1,747.22
Difference in 1886	+ 4	− 4	− 1,292	−227,633.00	−1,126.28

Of the 193 vessels launched in 1886, 14 were steamers (all tugs), of the aggregate tonnage of 229 tons. Of the sailing vessels launched in 1886 only 3 were of more than 500 tons each. The difference between the number, tonnage, and value of vessels launched in 1885 and 1886 was very slight.

STATEMENT No. 31.—*Number and tonnage of sailing vessels belonging to the Italian mercantile marine in* 1886.

Size.	No.	Tonnage.
1 to 10 tons	2,332	14,901
11 to 30 tons	1,583	28,762
31 to 50 tons	822	33,059
51 to 100 tons	670	49,647
101 to 200 tons	364	52,284
201 to 300 tons	206	52,473
301 to 400 tons	203	72,083
401 to 500 tons	288	132,690
501 to 600 tons	197	109,509
601 to 700 tons	112	70,509
701 to 800 tons	94	68,787
801 to 900 tons	56	48,227
901 to 1,000 tons	37	35,936
1,001 to 1,800 tons	28	32,482
Total	6,992	801,349

The foregoing statement shows a decrease of 119 in the number of vessels and of 27,470 in the tonnage of the sailing vessels belonging to the Italian mercantile marine in 1886 as compared with 1885. On the other hand, the following statement shows an increase of 12 in the number of Italian steamers, and an increase of 19,728 in the tonnage of the Italian steam merchant marine.

STATEMENT No. 32.—*Number and tonnage of Italian merchant steamers on December* 31, 1886.

Size.	No.	Tonnage.
1 to 50 tons	60	1,177
51 to 100 tons	15	1,164
101 to 200 tons	15	1,993
201 to 300 tons	22	5,428
301 to 400 tons	14	4,879
401 to 500 tons	12	5,354
501 to 600 tons	9	5,080
601 to 700 tons	9	5,890
701 to 800 tons	11	8,217
801 to 900 tons	10	8,675
901 to 1,000 tons	3	2,786
1,001 to 1,500 tons	33	41,302
Above 1,500 tons	24	52,383
Total	237	144,328

STATEMENT No. 33.—*Number and tonnage of Italian sailing vessels in* 1886, *compared with the four preceding biennial periods.*

Size.	1886.		1884.		1882.		1880.		1878.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
1 to 10 tons	2,332	14,901	2,229	13,316	2,391	14,423	2,510	13,232	2,784	15,201
11 to 30 tons	1,583	28,762	1,702	28,559	1,886	31,382	1,924	31,898	2,087	35,499
31 to 50 tons	822	33,059	790	31,446	794	31,796	806	31,231	859	32,958
51 to 100 tons	670	49,647	668	49,214	687	50,433	710	51,616	758	52,076
101 to 200 tons	364	52,284	341	49,241	360	52,409	365	51,509	381	54,764
201 to 300 tons	206	52,473	215	54,765	231	58,829	246	62,367	256	64,119
301 to 400 tons	203	72,083	230	81,362	249	88,167	272	96,040	288	105,033
401 to 500 tons	288	132,690	340	156,100	355	163,073	380	174,141	379	172,458
501 to 600 tons	197	109,509	211	117,369	230	127,748	250	138,639	263	144,092
601 to 700 tons	112	70,509	122	76,915	133	83,966	140	88,506	160	102,896
701 to 800 tons	94	68,787	101	73,951	98	71,823	104	76,524	109	81,907
801 to 900 tons	56	48,227	63	54,196	66	56,710	62	53,112	66	56,190
901 to 1,000 tons	37	35,936	34	33,029	35	34,053	35	34,054	29	27,555
1,001 and over	28	32,482	26	29,241	19	20,473	18	19,277	19	21,387
Total	6,992	801,349	7,072	848,704	7,528	885,285	7,822	922,146	8,438	966,137

STATEMENT No. 34.—*Number and tonnage of Italian steamers in* 1886, *compared with the four preceding biennial periods.*

Size.	1886.		1884.		1882.		1880.		1878.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
1 to 50 tons	60	1,177	61	1,142	46	937	40	882	33	743
51 to 100 tons	15	1,164	18	1,351	16	857	14	987	22	1,548
101 to 200 tons	15	1,993	13	1,738	17	2,148	13	1,698	14	1,797
201 to 300 tons	22	5,428	17	4,119	8	1,930	9	2,245	7	1,735
301 to 400 tons	14	4,879	14	4,895	15	5,251	13	4,516	16	5,579
401 to 500 tons	12	5,354	4	1,714	11	5,012	13	5,848	10	4,441
501 to 600 tons	9	5,080	7	3,993	6	3,439	4	2,219	7	3,917
601 to 700 tons	9	5,890	9	5,842	8	5,018	4	2,550	7	4,430
701 to 800 tons	11	8,217	11	8,404	8	5,916	4	2,869	2	1,522
801 to 900 tons	10	8,675	11	9,602	10	8,598	7	5,949	6	5,173
901 to 1,000 tons	3	2,786	2	1,911	8	7,643	6	5,701	7	6,577
1,000 to 1,500 tons	33	41,302	27	33,183	26	31,368	26	30,852	20	23,730
Over 1,500 tons	24	52,383	21	44,403	13	26,602	5	10,734	1	1,828
Total	237	144,328	215	122,297	192	104,719	158	77,050	152	63,020

STATEMENT No. 35.—*Number of men employed in the Italian mercantile marine in* 1886.

Occupation.	Number.	Occupation.	Number.
Masters	6,888	Workmen in iron-ship building	1,746
Mates	3,315	Pilots	270
Pursers' clerks	640	Coast fishermen	44,226
Engineers	501	Boatmen	11,906
Able seamen	7,535		
Ordinary seamen and boys	89,587	Total in 1886	189,921
Firemen	3,327	Total in 1885	192,046
Deep-sea fishermen	6,508		
Naval engineers and constructors	263	Difference	2,125
Carpenters, etc	13,209		

STATEMENT No. 36.—*Shipwrecks in Italian waters in* 1886.

	Number.	Tons.
Italian vessels wrecked	77	*7,652
Foreign vessels wrecked	13	*3,979
Total	90	11,631

*The tonnage of 5 vessels was not ascertained.

There were in addition 53 Italian vessels, of the aggregate tonnage of 18,875,* wrecked in 1886 in foreign waters, making the total losses of Italian vessels in that year, as nearly as can be ascertained, 132, of the aggregate tonnage of 26,527.

The whole number of deserters from the Italian merchant marine in 1886 was 581, or 106 less than in 1885. Of these desertions 104 occurred in ports of the United States.

In spite of the increase in the tonnage of Italian steamers in 1886 the total tonnage of the Italian mercantile marine was less in that year than in the preceding year. The total tonnage in 1885 was 953,419. The total tonage in 1886 was 945,677. There was thus a decrease of 7,442 tons. The result of the bounty and subsidy system adopted by the Italian Government two years ago has not yet been seen in a revival of Italian ship-building to any appreciable extent.

* The tonnage of one vessel was not ascertained.

SHIPPING BOUNTIES.

In the last annual report from this office were mentioned the provisions of the law of December, 1885, for the payment of shipping bounties. These bounties, as established by the said law, are as follows:

For sailing vessels of wood built in Italy	per ton..	$2.89
For sailing vessels of iron or steel built in Italy	do....	11.58
For steamers of iron or steel built in Italy	do....	11.58
For marine engines (per horse-power)	do....	5.79
For marine boilers and the repair of boilers built in Italy (for every 220.464 pounds)		1.93

Under this law, all vessels built in Italy or built abroad, if placed under the Italian flag within one year from the passage of the law, were to be entitled to a premium of 65 cents per ton for every 1,000 miles of distance sailed, subject to the following conditions: Sailing vessels, in order to receive this premium, must be not more than fifteen years old, and steamers must be not more than ten years old, and the premium is to be paid only to vessels sailing from continent to continent. The law is to remain in force for ten years from the date of its passage. This summary (taken from the last annual report) is quoted here in order to make the following tables intelligible.

STATEMENT No. 37.—*Bounties paid for ship-building in* 1886.

Vessels built.	No.	Amount of bounty paid.
Sailing vessels of wood	190	$13,331
Sailing vessels of iron	1	2,634
Steamers of iron or steel	19	
Engines and boilers	.....	4,427
Total	.....	20,392

STATEMENT No. 38.—*Bounties paid for repairs to vessels, machinery, and boilers in* 1886.

For what paid.	Amount.
Repairs to vessels	$18,220
Repairs to machinery	7,921
Repairs to boilers	2,977
Total	29,118

Under the law of December 6, 1885, special bounties are paid of 19.3 cents per ton for every ton weight of coal brought into Italy from beyond the straits of Gibraltar in Italian vessels, provided each cargo of coal is equal to one-fifth of the tonnage of the vessel. There were engaged in this business in 1886, 141 sailing vessels of 79,138 tons, and 17 steamers of 21,200 tons. The amount of coal carried by the former was 126,450 tons, and the amount of coal carried by the latter was 45,550 tons, making in all 172,000 tons. For the transport of this coal there was paid $26,668 in bounties.

In 1886 premiums for navigation were paid to 24 steamers, of which 21 belonged to the General Italian Navigation Company.

The following statement shows the number and character of the voyages made by these vessels:

STATEMENT No. 89.—*Number and character of voyages made by Italian steamers in 1886, for which premiums were paid.*

Voyages.		No.	Freight.	Passengers.	Miles run.	Premium paid.
From—	To—					
			Tons.			
Italy	United States	23	36,765	5,433	98,537	$18,884
Do	South America	35	35,662	31,126	202,264	55,037
Do	Pacific	5	5,257	4,619	48,158	10,912
Do	China	1	3,857	629	7,159	2,869
South America, United States	Europe, and chiefly Italy	39, 23	42,041, 48,364	10,072, 1,738	224,803, 95,341	60,666, 18,231
Pacific	Italy	2	429	96	12,142	2,834
Asia	do	1	8,487	669	2,833	1,069
Total		129	180,362	54,382	691,237	170,502
Palermo	New York	5	9,420	121	20,570	3,455
Do	New Orleans	2	900	800	11,008	1,850
Naples	New York	12	19,410	4,447	50,064	10,609
Catania	do	2	3,100	35	8,606	1,462
Porto Empedocle	do	1	1,135	.....	4,100	721
Majori	do	1	2,800	.....	4,189	779
Total		23	36,765	5,433	98,537	18,885
New York	Cardiff	1	2,400	.....	2,991	557
Do	Marseilles	2	4,165	.....	7,914	1,303
Do	Genoa	12	25,460	689	50,166	9,264
Do	Leghorn	2	4,200	39	8,110	1,573
Do	Naples	3	6,250	708	12,516	3,304
Do	Palermo	2	4,600	302	8,226	1,675
New Orleans	Genoa	1	1,289	.....	5,428	949
Total		23	48,364	1,738	95,341	18,625

During 1886 premiums for navigation amounting to $464,264 were paid to 493 sailing vessels. These vessels sailed in all 5,706,615 miles, making 1,016 voyages, and carrying 803,749 tons of freight.

Of these voyages 209 were made from Europe to North America, and 272 from North America to Europe. By these voyages 130,921 tons of freight were carried to, and 206,301 tons of freight were brought from North America.

It does not appear that the navigation premiums have produced much result. The number of voyages and the tons of freight carried have not materially increased since the passage of the law. In fact the General Italian Navigation Company, which at one time employed a fleet of five fine passenger steamers in the service between New York and Palermo, has during the past year withdrawn all but two of these steamers and substituted in their place smaller freight boats.

EXPORTS AND IMPORTS.

The following table shows the commerce of Italy with other nations in 1886, as compared with 1885:

STATEMENT No. 40.—*Commerce of Italy with other nations in* 1886 *compared with* 1885.

Articles.	Imports.		Exports.	
	1886.	1885.	1886.	1885.
Spirits, wines, and oils	$9,854,931	$16,347,655	$33,375,268	$21,905,186
Groceries, spices, and tobacco	14,753,749	24,328,894	1,236,709	1,215,851
Chemicals, drugs, resins, and perfumery	7,254,659	6,953,185	7,253,335	6,970,829
Dyes, dye-stuffs, and articles for tanning purposes	4,417,236	4,813,356	2,126,179	2,360,166
Hemp, flax, jute, etc	6,498,391	7,055,512	7,515,075	8,068,241
Cotton	29,178,427	34,063,475	4,384,490	4,864,550
Wool and hair	20,628,559	19,988,027	2,483,779	1,132,419
Silk	23,951,389	17,647,052	65,621,183	53,455,172
Wood and straw	16,348,219	11,290,007	10,486,584	12,004,921
Books and paper	3,186,794	2,993,008	1,368,099	1,515,492
Skins, hides, and furs	10,653,432	12,926,143	3,384,183	3,951,087
Minerals and metals	42,677,393	54,460,860	14,204,246	41,624,945
Stone, earths, pottery, and glass	19,869,687	20,121,983	11,128,315	11,486,037
Cereals, flour, and vegetable products not elsewhere included	51,182,392	39,119,227	18,867,490	21,473,991
Animals and animal products not elsewhere included	21,300,300	22,380,568	22,090,672	24,378,902
Miscellaneous	9,856,736	9,531,809	2,162,076	2,516,084
Total	291,614,294	304,020,761	207,687,633	218,923,873

NOTE.—The totals in statements Nos. 40 and 42 do not precisely agree, for the reason that in the former statement the figures are given up to hundreds of lire (converted into dollars), while in the latter statement they are only given up to thousands of lire (converted into dollars).

The foregoing table shows that the imports in 1886 were $12,406,467 less than the imports in 1885. The categories in which these differences occurred were the following:

STATEMENT No. 41.—*Difference of imports and exports in* 1886 *and* 1885.

Articles.	Imports.		Exports.	
	Increase in 1886.	Decrease in 1886.	Increase in 1886.	Decrease in 1886.
Spirits, wines, and oils		$6,492,724	$11,470,082	
Groceries, spices, and tobacco		9,575,145	20,858	
Chemicals, drugs, resins, and perfumery	$301,474		282,506	
Dyes, dye-stuffs, and articles for tanning purposes		396,120		$233,987
Hemp, flax, jute, etc		557,121		553,166
Cotton		4,885,048		480,060
Wool and hair	640,532		1,355,360	
Silk	6,304,337		12,165,961	
Wood and straw	5,058,212			1,518,337
Books and paper	193,786			147,393
Skins, hides, and furs		2,272,711		566,904
Minerals and metals		11,783,467		27,420,699
Stone, earth, pottery, and glass		252,296		357,722
Cereals, flour, and vegetable products not elsewhere included	12,063,165			2,606,501
Animals and animal products not elsewhere included		1,080,268		2,268,230
Miscellaneous	326,927			354,008
Total	24,888,433	37,294,900	25,290,767	36,527,007

The chief increase in imports during the year was in the category of cereals, in which there was an increase of $12,063,165. This increase was larger than in the preceding year, when the increase as compared with the year 1884 was $11,908,768. The increase in the category of wood and straw was $5,058,212, as compared with an increase of only $489,405. The aggregate decrease in several categories was, however, larger than the aggregate increase.

There was a decrease of $11,783,467 in the category of minerals and metals; of $9,575,145 in the category of groceries, spices, and tobacco, due to some extent to an increase of duties on several articles in this category; a decrease of $6,492,724 in the category of spirits, wines, and oils, and of $4,885,048 in cotton.

Perhaps the most noteworthy feature of the foregoing statement is the activity in the silk trade. In 1884 there had been a decrease in the imports of silk of $1,759,740, and a decrease in the exports of $4,483,893. In 1886 there was an increase of $6,304,337 in the imports of silk, and an increase of $12,165,961 in its exports. There was an increase of $11,470,082 in the exports of spirits, wines, and oils; and the very large decrease of $27,420,699 in the exports of minerals and metals. In the exports of the latter category there had been an increase in 1885 of $31,632,969. The prevalence of the cholera has naturally tended to cause a diminution in exports, as well as a depressing effect upon commerce generally.

STATEMENT No. 42.—*Commerce of Italy with other nations in* 1886, *compared with* 1885.

Countries.	Imports.		Exports.	
	1886.	1885.	1886.	1885.
Austria	$43,346,642	$45,568,651	$19,368,708	$19,645,277
Belgium	5,534,854	6,584,967	2,983,780	3,950,131
France	66,895,923	70,984,435	91,955,236	99,135,801
Germany	24,960,111	23,241,060	20,858,282	20,313,250
Great Britain	53,086,194	60,618,212	13,741,986	14,235,487
Greece and Malta	1,416,020	4,313,936	2,627,309	3,218,082
Holland	1,539,947	2,349,389	1,816,516	1,380,705
Russia	18,297,751	17,661,430	3,495,809	3,501,599
Spain, Gibraltar, and Portugal	1,619,849	2,744,653	2,579,638	2,796,956
Sweden, Norway, and Denmark	1,368,756	827,005	564,525	344,505
Switzerland	18,306,436	14,862,930	17,310,556	24,099,717
European Turkey	8,940,146	9,281,370	2,576,743	2,783,446
Asiatic Turkey	1,731,739	3,870,808	505,274	319,415
British India	19,209,483	14,770,483	3,671,439	3,150,339
China and Japan	36,091	94,763	23,546	36,070
Egypt	2,084,207	4,089,284	4,084,845	2,532,932
Tunis and Tripoli	2,713,966	2,310,017	1,497,673	2,113,543
Algiers	769,491	1,072,694	314,011	276,569
Other African countries	152,084	185,280	240,092	399,703
United States and Canada	10,602,478	13,985,938	10,084,443	8,807,169
The States of the Plata	4,048,368	3,089,544	5,613,791	4,628,333
Peru and Chili	41,495	11,580	615,284	350,488
Other American countries	4,851,634	1,491,890	1,128,857	846,305
Australia	.....	10,615	29,143	51,145
Total	291,614,815	304,020,934	207,687,686	218,923,567

The foregoing statement shows a decrease in exports in 1886, as compared with 1885, of $11,236,240.

The following statements show the total imports from and exports to the United States and Canada in 1886, 1885, 1884, 1883, and 1882:

STATEMENT No. 43.—*Imports into Italy from the United States and Canada for the five years ending December* 31, 1886.

Articles.	1882.	1883.	1884.	1885.	1886.
Spirits, wines, and oils	$3,417,065	$4,044,701	$3,826,611	$3,907,478	$2,538,529
Groceries, spices, and tobacco	4,261,440	1,771,354	2,229,729	3,668,930	1,332,472
Chemicals, drugs, resins, and perfumery	598,686	1,113,417	1,573,723	1,022,128	1,159,544
Dyes, dye-stuffs, and articles for tanning purposes	33,582	115,221	93,026	83,376	84,148
Hemp, flax, jute, etc	8,878	1,544	4,246	9,843	9,650
Cotton	3,118,687	2,250,766	1,980,373	3,118,880	2,061,470
Wood and hair	740,541	537,312	363,805	352,032	502,186
Silk					386
Wood and straw	121,783	94,570	128,731	290,079	406,844
Books and paper	2,702	1,544	6,549	11,966	4,825
Skins, hides, and furs	96,690	652,340	540,593	446,023	522,258
Minerals and metals	54,426	207,668	94,184	152,012	90,507
Stone, earths, pottery, and glass	60,023	35,126	199,176	54,426	83,106
Cereals, flour, and vegetable products not elsewhere included	485,781	83,762	303,203	520,714	993,371
Animals and animal products not elsewhere included	311,888	382,486	239,899	334,276	302,421
Miscellaneous	3,088	8,492	20,262	33,775	20,651
Total	13,315,260	11,300,303	11,604,109	13,985,938	*10,662,458

* The discrepancy between this statement and statement No. 42 exists in the official figures.

STATEMENT No. 44.—*Exports from Italy to the United States and Canada for the five years ending December* 31, 1886.

Articles.	1882.	1883.	1884.	1885.	1886.
Spirits, wines, and oils	$1,120,751	$928,488	$684,764	$546,962	$1,055,903
Groceries, spices, and tobacco	288,535	370,946	305,133	88,587	429,425
Chemicals, drugs, resins, and perfumery	1,069,220	1,064,588	939,331	1,389,793	1,314,390
Dyes, dye-stuffs, and articles for tanning purposes	370,946	506,625	419,003	387,930	454,708
Hemp, flax, jute, etc	36,885	121,011	74,305	85,885	48,443
Cotton	7,334	31,073	40,723	158,452	132,591
Wool and hair	260,473	26,441	61,953	45,355	32,810
Silk	65,234	18,526	20,261	76,385	71,410
Wood and straw	957,280	246,654	98,044	341,057	26,827
Books and paper	268,463	222,336	136,351	77,586	20,651
Skins, hides, and furs	17,177	55,584	97,079	1,544	80,674
Minerals and metals	139,732	226,968	12,545	283,131	370,946
Stone, earth, pottery, and glass	3,533,058	3,318,635	2,904,843	2,324,492	2,297,858
Cereals, flour, and vegetable products not elsewhere included	3,553,323	4,038,686	4,582,399	2,850,417	3,555,832
Animals and animal products not elsewhere included	107,115	179,297	195,316	160,962	114,063
Miscellaneous	48,036	33,397	58,097	88,780	77,972
Total	11,844,212	11,389,249	10,630,147	*8,907,168	10,084,443

* The discrepancy between this statement and statement No. 42 exists in the official figures.

The specific articles imported into Italy from the United States and Canada in 1886, and exported from Italy to the United States and Canada in 1886, were as follows:

STATEMENT No. 45.—*Imports into Italy from the United States and Canada in* 1886.

Articles.	Quantity.	Value.
Spirits:		
In wood ..... gallons..	475	$579
In bottles ..... number..	1,200	579
Cotton-seed oil ..... pounds..	3,444,246	211,142
Heavy oils ..... do....	673,504	8,878
Fixed oils, not elsewhere mentioned ..... do....	804,458	52,882
Petroleum and mineral oils, refined ..... do....	143,686,788	2,264,276
Volatile oils and essences ..... do....	115	193
Coffee ..... do....	1,132,148	162,664
Sugar, second quality ..... do....	166,666	5,211
Cocoa, unprepared ..... do....	26,896	5,018
Cinnamon ..... do....	1,963	386
Cloves ..... do....	1,984	386
Pepper and pimento ..... do....	77,601	10,808
Tobacco, raw ..... do....	88,346	1,146,806
Cigars ..... do....	619	193
Soda, caustic (crude) ..... do....	29,198	579
Medicinals, herbs, and roots ..... do....	7,936	2,123
Gums and resins ..... do....	8,777,173	1,152,596
Dyes and dye-stuffs, not prepared ..... do....	3,445,569	75,463
Gambier ..... do....	19,840	965
Other dyes and dye-stuffs ..... do....	88,845	7,720
Hemp and flax, combed ..... do....	43,649	4,825
Made-up articles of linen ..... do....	18,738	4,825
Cotton:		
Raw ..... do....	27,574,691	2,655,487
Tissues, unbleached ..... do....	1,323	386
bleached ..... do....	7,273	2,316
colored or dyed ..... do....	2,865	965
printed ..... do....	1,102	579
Oil-cloths ..... do....	2,646	965
Made-up articles of cotton ..... do....	1,763	772
Wool, raw ..... do ..	2,262,577	455,480
Hair, not human, raw and dyed ..... do....	152,577	37,442
Mattresses ..... do....	1,543	386
Woolen tissues ..... do....	7,494	6,562
Made-up articles of wool ..... do....	1,323	2,316
Silk tissues, miscellaneous ..... do....	42	386
Wood:		
For cabinet makers ..... do....	568,786	17,370
Common ..... cubic meters..	40,397	350,874
Staves ..... pounds..	30,224	579
Barrels, new and old ..... hectoliters of capacity..	1,822	2,120
Furniture:		
Common, not upholstered ..... pounds..	7,152	965
Inlaid, etc ..... do....	7,152	3,281
Broom grass ..... do....	15,428	772
Wooden utensils ..... do....	5,511	386
Matting, straw and rush, common ..... do....	7,152	386
Straw braids ..... do....	22,928	30,108
White paper ..... do....	4,850	386
Prints and lithographs ..... do....	441	579
Books:		
Unbound ..... do....	4,850	2,123
Bound in leather and parchment ..... do....	3,086	1,737
Hides:		
Bovine ..... do....	2,826,738	500,449
Small, ovine and caprine ..... do....	12,344	1,737
Tanned ..... do....	7,936	3,281
Patent leather ..... do....	13,006	16,019
Boots and gaiters ..... pairs..	300	772
Iron:		
Cast in plates ..... tons..	626	7,913
Wrought ..... pounds..	34,611	1,737
Hammered and wrought ..... do....	17,191	193
Of second manufacture ..... do....	41,666	1,351
Of second manufacture, garnished with other metals ..... do....	3,086	193
Tin, manufacturep ..... do....	6,172	386
Miscellaneous tools and utensils of iron and steel ..... pounds..	13,006	965
Pistols and revolvers ..... number..	400	772
Machinery and parts of ..... pounds..	623,900	62,725
Clocks ..... number..	37,800	2,120
Clock cases ..... pounds..	1,102	2,120
Clock works ..... do....	2,204	9,650
Coal ..... tons..	7,446	33,003

STATEMENT No. 45.—*Imports into Italy from the United States, etc.*—Continued.

Articles.	Quantity.	Value.
Pottery, common ..... pounds..	18,297	$193
Grain ..... tons..	5,859	627,443
Indian corn ..... do....	3,993	111,747
Other cereals ..... do....	5,002	159,225
Rice:		
Hulled ..... do....	2,413	76,814
Unhulled ..... do....	148	7,913
Flour ..... pounds..	189,812	5,211
Bran ..... do....	106,922	965
Starch ..... do....	6,393	386
Oleaginous seeds ..... do....	70,106	.....
Palm oil ..... do....	25,132	1,737
Gut, salted ..... do....	37,254	1,930
Fish, dried or smoked ..... do....	184,964	4,825
Grease ..... do....	3,991,869	279,697
Candles, stearine ..... do....	7,152	965
Beeswax, crude ..... do....	5,732	1,351
Ivory, mother of pearl, and tortoise shell (crude) ..... do....	1,102	2,123
Horns, bone, and the like ..... tons..	132	3,860
Haberdashery:		
Common ..... pounds..	5,511	3,474
Fine	.....	5,018
Instruments, optical, surgical, and chemical	.....	10,036
India rubber and gutta-percha, crude or manufactured	.....	1,737
Articles for collections and museums	.....	386

STATEMENT No. 46.—*Exports from Italy to the United States and Canada in* 1886.

Articles.	Quantity.	Value.
Wine:		
In wood ..... gallons..	645,261	$169,647
In bottles ..... number..	205,200	75,270
Vinegar, common, in wood ..... gallons..	1,100	193
Spirits:		
In wood ..... do....	607	193
In bottles ..... number..	22,000	9,650
Olive oil ..... pounds..	5,536,411	581,702
Volatile oils, essence of orange, and the like ..... do....	166,677	212,862
Other volatile oils and essences ..... do....	198	386
Candied fruit and preserves ..... do....	2,227,091	341,224
Chocolate ..... do....	4,850	1,158
Mustard seed ..... do....	273,148	10,808
Drugs, miscellaneous ..... do....	348,326	76,235
Acids:		
Boracic ..... do....	348,102	15,247
Gallic, tannic, and acetic ..... do....	107,584	1,930
Salts of quinine ..... do....	4,898	51,531
Borax ..... do....	3,747	193
Marine salt ..... tons..	51,085	108,456
Tartar ..... pounds..	6,241,002	819,478
Wax matches ..... do....	152,777	30,687
Miscellaneous chemical products ..... do....	330,247	23,160
Liquorice root ..... do....	132,496	3,474
Miscellaneous medicinal herbs, flowers, leaves, and bark ..... do....	239,640	21,037
Manna ..... do....	144,400	63,304
Lemon and citron juice ..... do....	302,687	26,441
Miscellaneous vegetable juices ..... do....	77,380	9,457
Miscellaneous medicinals ..... do....	161,153	5,597
Miscellaneous medicinals, prepared ..... do....	2,865	1,158
Soap, common ..... do....	2,289,697	130,275
Perfumery, not alcoholic ..... do....	7,273	2,895
Wood, leaves, bark, etc., for dyeing and tanning:		
Not ground ..... do....	285,274	6,176
Ground ..... do....	18,277,437	640,953
Indigo ..... do....	441	579
Hemp, raw ..... do....	128,086	8,878
Cordage ..... do....	263,889	29,336
Hemp, spun ..... do....	2,425	579
Hemp and linen fabrics:		
Unbleached ..... do....	1,763	386
Bleached ..... do....	24,692	9,071
Made up linen goods ..... do....	1,323	193
Cotton:		
Raw ..... do....	972,008	93,605
Tissues, bleached ..... do....	5,732	1,737

STATEMENT No. 46.—*Exports from Italy to the United States, etc.*—Continued.

Articles.	Quantity.	Value.
Cotton—Continued.		
Tissues, colored or dyed ..... pounds..	49, 824	$16, 212
Tissues, embroidered ..... do....	441	579
Buttons and trimmings ..... do....	22, 927	12, 931
Cotton laces ..... do....	882	1, 737
Cotton goods, made up ..... do....	14, 547	5, 790
Wool, raw ..... do....	7, 152	1, 737
Hair, not human ..... do....	32, 407	7, 913
Mattresses ..... do....	7, 714	1, 930
Woolen tissues ..... do....	9, 038	1, 369
Woolen hosiery ..... do....	3, 306	4, 825
Woolen carpets ..... do....	1, 984	772
Woolen goods, made up ..... do....	5, 292	9, 2.4
Silk:		
Spun ..... do....	9, 479	49, 794
Waste ..... do....	4, 188	3, 474
Tissues ..... do....	115, 522	9, 843
Tissues, made up ..... do....	67, 461	8, 299
Wood, common ..... cubic meters..	782	6, 755
Barrels, new and old ..... hectoliters of capacity..	1, 730	1, 930
Furniture, veneered or inlaid ..... pounds..	21, 824	10, 422
Broom corn ..... do....	45, 635	5, 597
Wooden tools or utensils ..... do....	40, 243	2, 123
Rags ..... do....	83, 109	2, 316
Paper:		
White, all qualities ..... do....	99, 426	8, 492
Blotting ..... do....	3, 968	386
Wrapping ..... do....	40, 243	1, 158
Prints and lithographs ..... do....	3, 306	4, 246
Books:		
Not bound ..... do....	10, 361	2, 316
Bound ..... do....	1, 984	965
Music ..... do....	1, 323	772
Hides, ovine and caprine:		
Crude ..... do....	2, 646	386
Tanned ..... do....	2, 204	5, 404
Leather gloves ..... pairs..	257, 400	74, 498
Shoes ..... do....	300	386
Iron ore ..... tons..	173, 807	369, 016
Iron of second fabrication ..... pounds..	15, 428	579
Tin, not manufactured ..... do....	7, 152	386
Copper and brass, wrought ..... do....	3, 086	579
Machinery, parts of ..... do....	3, 086	386
Marble, block ..... tons..	10, 950	126, 801
Alabaster, block ..... pounds..	22, 928	193
Marble and alabaster:		
Slabs ..... do....	17, 195, 480	165, 401
Statuary ..... do....	139, 108	36, 477
Wrought ..... do....	6, 205, 510	259, 392
Earths for dyes or paints ..... do....	700, 178	6, 176
Cements ..... tons..	1, 250	9, 650
Bricks and tiles of terra cotta ..... do....	346	2, 702
Sulphur ..... do ..	104, 781	1, 678, 521
Graphiti ..... pounds..	462, 966	2, 123
Flooring tiles ..... do....	14, 304	193
Pottery, common ..... do....	29, 982	386
Majolica ware:		
White ..... do....	40, 342	2, 702
Decorated ..... do....	36, 372	3, 474
Porcelain:		
White ..... do....	1, 987	193
Decorated ..... do....	3, 306	772
Glass and glassware ..... do....	7, 936	772
Vegetables, dried ..... tons..	61	2, 316
Cereals ..... do....	39	1, 158
Chestnuts ..... do....	128	5, 018
Potatoes ..... do....	48	772
Rice, hulled ..... do....	1, 000	66, 585
Maccaroni ..... pounds..	2, 399, 285	100, 746
Sea-biscuit ..... do....	80, 330	3, 281
Oranges and lemons ..... do....	162, 390, 480	2, 840, 574
Pistachio nuts ..... do....	5, 292	3, 088
Almonds:		
Shelled ..... do....	675, 687	88, 973
Unshelled ..... do....	46, 517	3, 281
Filberts ..... do....	4, 773, 620	250, 707
Miscellaneous, oleaginous fruits ..... do....	10, 141	772
Figs, dried ..... do....	699, 279	18, 335
Raisins ..... do....	165, 785	7, 141
Dried fruit, miscellaneous ..... do....	229, 498	8, 106
Fruit and vegetables in brine, vinegar, or oil ..... do....	82, 672	7, 141
Mushrooms ..... do....	36, 372	14, 282

STATEMENT No. 46.—*Exports from Italy to the United States, etc.*—Continued.

Articles.	Quantity.	Value.
Oleaginous seeds ..... pounds..	250,220	$6,562
Miscellaneous seeds ..... do....	3,087,983	121,590
Vegetables, fresh ..... do....	53,130	1,155
Vegetable products, miscellaneous, not included elsewhere ..... do....	482,066	4,246
Meat, salted and smoked ..... do....	85,978	16,598
Fish:		
In brine ..... do....	9,700	772
Pressed in boxes ..... do....	26,455	3,667
Butter ..... do....	69,003	14,861
Cheese ..... do....	505,072	75,077
Grease ..... do....	4,850	386
Coral, rough ..... do....	77,160	2,702
Haberdashery, common ..... do....	31,305	16,405
Musical instruments ..... number..	45	193
Articles for collections and museums ..... declared value..	.....	61,374

On the whole we may say, in view of the entire export and import trade of Italy in 1886, that the wine and silk industries have been in a very flourishing condition, and that the growth of Italian iron and steel works has had the effect of lessening the exportations of iron in consequence of the demand for ore at home.

CHOLERA.

In 1885 there were in Italy 6,397 cases of cholera and 3,459 deaths. It was hoped that the disease would not re-appear in 1886, but unfortunately it broke out again with much violence in that year, and from the 1st of January to the 10th of November (the date of the last case in 1886) there were 56,128 cases and 26,375 deaths.

The localities visited by the disease are shown in the following statement, No. 47.

STATEMENT No. 47.—*Cholera in Italy in* 1886.

Provinces.	No. communes in which cholera appeared.	No. cases.	No. deaths.
Alessandria	53	1,248	627
Arezzo	1	23	10
Ascoli	11	492	266
Avellino	4	397	162
Bari	42	8,835	3,512
Belluno	11	63	37
Benevento	1	89	33
Bergamo	53	244	134
Bologna	33	1,178	765
Brescia	24	73	53
Cagliari	4	102	65
Campobasso	1	1	1
Caserta	6	19	13
Chieti	2	23	8
Como	6	201	110
Cremona	21	74	48
Cuneo	96	4,245	2,049
Ferrara	16	3,368	1,578
Florence	4	38	27
Foggia	24	1,746	823
Forli	15	346	242
Genoa	28	932	593
Grosseto	1	1	1
Lecca	56	6,491	2,726
Lucca	3	10	10
Marsala	2	4	3
Mantua	14	96	64

STATEMENT No. 47.—*Cholera in Italy in* 1886—Continued.

Provinces.	No. communes in which cholera appeared.	No. cases.	No. deaths.
Massa	6	257	131
Milan	20	159	80
Modena	9	94	68
Naples	15	484	307
Padua	101	4,399	2,158
Parma	2	4	3
Pavia	33	780	395
Perugia	1	1	.....
Pesaro	13	297	151
Piacenza	8	28	18
Pisa	4	22	14
Ravenna	10	1,123	692
Reggio (Emilia)	3	5	4
Rome	2	55	32
Rovigo	59	2,041	970
Salerno	9	34	19
Sassari	2	5	4
Teramo	4	89	46
Turin	20	212	153
Treviso	78	4,078	1,656
Udine	59	718	405
Venetia	45	3,051	1,717
Verona	73	3,203	1,460
Vicenza	93	4,650	1,930
Total	1,203	56,128	26,373
Total in 1885	.....	6,397	3,459
Increase in 1886	.....	49,731	22,914

RECAPITULATION.

	Cases.	Deaths.
Total in 1886	56,128	26,373
Total in 1885	6,397	3,459
Total in 1884	26,557	14,203
Total cases and deaths in Italy from the beginning of the late epidemic to November 10, 1886	89,082	44,035

As in previous years, the cholera made no extensive ravages in 1886, except in places where the water supply was easy to be contaminated. There were a few cases in the city of Rome in the fall of 1886, but the disease soon disappeared and at no time assumed dangerous proportions.

REVISED TARIFF.

On the 1st of January, 1888, a revised Italian tariff upon imports into Italy will go into effect. In the following statement the duties to be paid after January 1, 1888, upon imports from the most favored nations, including the United States, are classed as "conventional duties," but in many of the categories these duties have not yet been classified and published in such a shape that they can be accurately given here. In all such cases no conventional duty is mentioned in the following statement. "General duties" are those paid by all other than the most favored nation.

STATEMENT No. 48.—*Italian customs tariff to go into effect January* 1, 1888.

Articles.	Unit.	General duties.	Conventional duties.
CLASS I.—*Spirits, beverages, and oils.*			
Mineral waters, natural and artificial, and water containing carbonic acid gas.	Quintal	$0.96	$0.10
Wines:			
In wood	Hectoliter	2.89	.77
In bottles	Per 100	5.79	.77
Vinegar:			
In wood	Hectoliter	1.93	1.93
In bottles	Per 100	4.83	4.83
Beer:			
In wood	Hectoliter	2.31	.39
In bottles	Per 100	2.31	.39
Spirits:			
Pure, in wood	Hectoliter	5.79	2.32
Sweetened or aromatized, including rum, brandies in wood.	do	11.58	4.83
Of any kind, in bottles holding more than half a liter and not more than a liter.	Per 100	11.58	4.83
Of any kind, in bottles of half liter and less	do	8.68	3.47
Ether and chloroform	Quintal	.77	.77
Fixed oils:			
Olive	do	1.15	.58
All other	do	1.15	1.15
Mineral and resinous oils:			
Light, crude	do	5.21	5.21
Rectified	do	6.36	6.36
Heavy—			
Containing up to 20 per cent. of light oil at 310 centigrade.	do	1.15	1.15
Containing more than 20 and less than 30, as above.	do	1.93	1.93
Volatile oils and essences:			
Of rose	Kilogram	7.72	7.72
Of orange and its varieties	do	.29	.29
Of cloves	do	1.45	.29
All other	do	1.54	.29
Yeast	Quintal	Free	Free.
CLASS II.—*Groceries, drugs, and tobacco.*			
Coffee	Quintal	27.02	27.02
Chicory and substitutes for coffee:			
Dried	do	Free	Free.
Ground or roasted	do	2.89	.97
Molasses		1.93	1.93
Sugar:			
First class	do	15.05	15.05
Second class	do	12.59	12.59
(All sugars that present a grade of whiteness superior to the sample No. 20, Holland, are classed as first class.)			
Glucose:			
Solid	do	12.59	12.59
Liquid	do	5.79	5.79
Sweetmeats and preserves, with sugar or honey	do	17.37	17.37
Tea biscuit	do	7.72	7.72
Sirups:			
For beverages	do	10.61	10.71
Dregs of sirups	do	5.79	5.79
Cocoa:			
Not ground	do	19.30	19.30
Crushed, ground, or in paste	do	24.12	24.12
Chocolate	do	27.02	27.02
Cinnamon	do	23.16	23.16
Cloves	do	23.16	23.16
Pepper and pimento	do	19.30	19.30
Tea	do	38.60	57.90
Vanilla	do	57.90	57.90
Saffron	do	77.20	77.20
Nutmegs:			
With the shell	do	96.50	96.50
Without the shell	do	48.25	48.25
Mustard:			
Seeds of	do	Free	Free.
Liquid, in powder, or in combination	do	2.12	2.12

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS II—*Groceries, drugs, and tobacco*—Continued.			
Spices, not elsewhere mentioned	Quintal	$5.31	$5.31
Tobacco:			
In leaf and ribs of leaves	do	Prohibited	(*)
Cigars, Manilla, Havana, of the Havana model, and also cigarettes.	Kilogram	6.75	6.75
All other manufactured tobacco		3.86	3.86
CLASS III.—*Chemical products, medicines, resins, and perfumery.*			
Acids:			
Arsenious	Quintal	Free	0.38
Boracic	do	Free	Free.
Gallic and tannic, impure	do	Free	Free.
Acetic, impure	do	0.19	Free.
Hydrochloric	do	.19	.19
Nitric	do	.29	.19
Sulphuric	do	.10	.10
Tartaric	do	1.93	1.54
Acetic, pure	do	9.65	1.93
Phenic	do	1.93	1.93
All others	do	1.93	1.93
Ammonia and pure caustic soda	do	.96	.96
Potash and impure caustic soda	do	.67	.67
Alkaloids:			
Salts of quinine	Kilogram	1.93	.97
All others and their salts	do	1.93	.97
Oxide of iron, lead, and tin	Quintal	.77	.77
Oxide of zinc	do	.96	.96
Acetate of alumina, iron, lead, and copper	do	.19	.19
Carbonate of barytes	do	.38	.38
Carbonate of magnesia	do	4.82	4.82
Carbonate of lead	do	1.54	.97
Carbonate of soda	do	.67	.67
Carbonate of potash	do	.67	.67
Magnesia, calcined and caustic	do	9.65	9.65
Chloride of lime, potash, and soda (hypochlorite)	do	Free	Free.
Chloride of lime	do	Free	Free.
Chloride of potash	do	Free	Free.
Chloride of magnesia	do	.19	.19
Nitrate of silver	Kilogram	.96	.96
Nitrate of soda, refined, and of potash	Quintal	.57	.57
Nitrate of soda, crude	do	Free	Free.
Borax and borate of soda	do	.10	.10
Marine salt and rock salt	do	Prohibited	(*)
Sulphate of alumina, potash, and other alums	do	.10	.10
Sulphate of barytes	do	.19	.19
Sulphate of iron and manganese	do	.38	.38
Sulphate of copper and of zinc and iron	do	.38	.38
Sulphate of magnesia	do	.29	.29
Sulphate of soda	do	.10	.10
Sulphate of potash	do	.10	.10
Tartar (bitartrate of potash) and dregs of wine-press	do	Free	Free.
Cream of tartar	do	.77	.77
Sulphuret of mercury (cinnabar or vermilion)	do	19.30	4.83
Matches, of wood	do	1.93	Free.
Matches, of stearine, wax, and the like	do	2.89	2.89
Phosphorus	do	Free	Free.
Nitro-benzine, crude	do	.77	.77
Pyrolignite of iron, lead, lime, and alumine	do	.77	.77
Other chemical products	do	.77	.77
Gunpowder and other explosives	do	28.95	28.95
Percussion caps and cartridges:			
Cartridges, empty and uncapped	do	11.58	11.58
Cartridges, empty and capped	do	19.30	11.58
Cartridges, loaded	do	28.95	28.95
Percussion caps	do	28.95	28.95
Licorice root	do	Free	Free.
Herbs, flowers, leaves, lichens, and roots for medicinal purposes, not otherwise named.	do	.38	.38
Cassia and natural tamarind	do	1.35	1.35
Manna	do	1.93	1.93

* Prohibited.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS III.—*Chemical products, medicines, resins, and perfumery*—Continued.			
Camphor:			
Crude	Quintal	Free	Free.
Refined	do	$4.82	$4.82
Peel, fresh or dried, of lemon, orange, and their spices	do	Free	Free.
Bark of chinoona	do	Free	Free.
Juice of orange	do	Free	Free.
Juice of citron and lemon, crude	do	Free	Free.
Juice of citron and lemon, concentrated	do	Free	Free.
Juice of licorice	do	1.93	1.93
Juice of aloes and other medicinal vegetable substances, not elsewhere mentioned.	do	1.93	1.93
Medical substances, not elsewhere named	do	1.93	1.93
Medicines (compounds), not elsewhere named	do	23.16	23.16
Gums, resins, and gum-resins:			
Native, crude	do	Free	.19
All others	do	Free	Free.
Soap:			
Common	do	1.54	1.16
Perfumed	do	7.72	2.32
Of glycerine	do	11.58	11.58
Sealing wax	do	5.79	5.79
Perfumery:			
Alcoholic	do	19.30	7.24
Non-alcoholic	do	19.30	2.32
CLASS IV.—*Colors and materials for dyeing and tanning.*			
Woods, roots, peels, leaves, lichens, flowers, herbs, and fruits for dyeing and tanning:			
Not ground	Quintal	Free	Free.
Ground	do	.38	.38
Gambier	do	Free	Free.
Indigo, cochineal, and kermes	do	Free	Free.
Yellow and red prussiate of potash	do	Free	Free.
Color derived from tar and other bituminous substances.	do	Free	Free.
Color derived from tar, dry	do	Free	Free.
Color derived from tar, in paste or liquid	do	Free	Free.
Colored extracts of dye-woods, and other dyes of all sorts.	do	2.41	2.41
Colors in cakes, powder, or any other form	do	2.41	2.41
Varnish:			
Alcoholic	do	5.79	5.79
All others	do	5.79	5.79
Pencils:			
Of colored paste without wood, or with polished or varnished wood.	do	19.30	19.30
All others	do	9.65	9.65
Ink	do	2.89	2.89
Blacking:			
For shoes, in boxes	do	2.31	.97
For shoes in any other form	do	1.93	1.93
Of bone and calcined bones	do	.10	.10
Of lamp-black	do	.96	.96
All other kinds	do	.96	.96
CLASS V.—*Hemp, flax, jute, and other vegetable fibers, exclusive of cotton.**			
Hemp, flax:			
Raw	Quintal	Free	.....
Carded	do	Free	.....
Cordage and cables, tarred or otherwise (cord and thread of less than 2 millimeters in thickness are classed as hemp threads, according to their respective qualities).	do	2.21	.....
Nets	do	According to the threads of which they are composed.	.....
Threads of flax or hemp unbleached and untwisted:			
Threads of 600 meters per kilogram	do	2.21	.....
Threads from 6,000 to 15,000 per kilogram	do	3.47	.....
Threads above 15,000 per kilogram	do	5.01	.....
Threads of jute, untwisted and unbleached	do	1.93	.....

* The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS V.—*Hemp, flax, jute, and other vegetable fibers, exclusive of cotton*—Continued.*			
Threads of flax, hemp, or jute, untwisted:			
Washed or bleached	Quintal	25 per cent. more than the duty on unbleached.	
Dyed	do	do	
Threads of flax, hemp, or jute, twisted:			
Unbleached	do	$2.89 per quintal more than the duty on untwisted.	
Washed or bleached	do	do	
Dyed	do	do	
Thread of flax or hemp for sewing on spools, bobbins, and the like, for sale at retail; also shoe-makers' thread.	do	$4.82 plus the duty, according to quality.	
Tissues of jute:			
Unbleached	do	$3.86	
Velvety (vellutati)	do	28.95	
All other sorts	do	As tissues of flax or hemp.	
(Mixed tissues are classed as of the material which dominates in weight, or, in case the weight of the materials is the same, as of the class upon which the highest duty is imposed.)			
Tissues of flax or hemp:			
Unbleached, smooth—			
Having 10 threads or less in a square of 5 millimeters of warp and woof.	do	4.82	
Having from 10 to 26 threads as above	do	13.99	
Having from 26 to 40 threads as above	do	18.14	
Having more than 40 threads as above	do	23.16	
(When it is impossible to count the threads the material, if in this category, will be classed as having more than 40; if in Class VI it will be classed as having more than 50.)			
Unbleached, worked and damasked	do	$3.86 more per quintal than the duty on smooth.	
Bleached, smooth	do	25 per cent. more than the duty on unbleached, smooth.	
Bleached, worked and damasked	do	$3.86 more per quintal than the duty on bleached, smooth.	
Dyed, smooth (tissues, whether raw or bleached, having colored stripes and intended for hospitals and similar places for military purposes or for making bags or wrappings, are classed as tissues of flax, hemp, cotton, etc., raw or bleached, according to quality).	do	$6.74 more per quintal than the duty on unbleached, smooth.	
Dyed, worked and damasked	do	$3.86 more per quintal than the duty on dyed, smooth.	
Printed, smooth	do	$13.51 more per quintal than the duty on bleached, smooth.	
Printed, worked and damasked	do	$3.81 more per quintal than the duty on printed, smooth.	
Embroidered, with chain stitch	do	$38.60, besides the duty on the tissue.	
Embroidered with double stitch (a punto passato)	do	$57.90, besides the duty on the tissue.	
Hemp or linen oil-cloth:			
Tarred and oiled	do	5.79	
Waxed	do	5.79	
Hosiery and guipures of linen or hemp	Quintal	25.09	
Buttons of linen or hemp	do	25.09	$19.30
Ribbons of linen or hemp	do	25.09	
Laces and tulles	Kilograms	.96	
Tissues with metallic threads:			
Of gold and fine silver, or gilded and silvered		$0.96 plus the duty on the tissues.	
Of common metal	Kilogram	$0.38 plus the duty on the tissues.	

* The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS V.—*Hemp, flax, jute, and other vegetable fibers, exclusive of cotton*—Continued.*			
Sewed articles:			
Bags, table and bed linen, towels, and the like	Quintal	10 per cent. more than the duty on the tissues.	.....
All others	.....	40 per cent. more than the duty on the tissues.	.....
CLASS VI.—*Cotton.**			
Cotton:			
In bales or in mass	Quintal	Free	.....
In wadding	....do	$1.15	.....
Threads, untwisted and unbleached:			
Not measuring more than 10,000 meters for every half kilogram.	....do	3.47	.....
Measuring from 10,000 to 20,000 meters for every half kilogram.	....do	4.63	.....
Measuring from 20,000 to 30,000 meters for every half kilogram.	....do	5.79	.....
Measuring from 30,000 to 40,000 meters for every half kilogram.	....do	6.94	.....
Measuring from 40,000 to 50,000 meters for every half kilogram.	....do	8.10	.....
Measuring from 50,000 to 60,000 meters for every half kilogram.	....do	9.20	.....
Measuring over 60,000 meters for every half kilogram.	....do	11.58	.....
Threads, untwisted and bleached (thread with a light tint that disappears after washing are classed as bleached).	....do	20 per cent. more than the duty on unbleached.	.....
Threads, dyed	....do	$4.82 per quintal more than the duty on unbleached.	.....
Threads, twisted (in twisted threads the classification is made by multiplying the length by the number of threads).	....do	$2.89 more per quintal than the duty on untwisted.	.....
Warps	....do	15 per cent. more than the duty on the thread of which it is composed.	.....
Sewing thread on spools, bobbins, and the like, for the retail trade.	....do	$4.82 plus the duty according to the quality.	.....
Thread of Llamma wool	....do	10 per cent. kilogram in addition to the duty on other thread.	.....
Cotton cordage (cordage tarred or greased is not considered as dyed).	....do	Duty as on the thread of which it is composed.	.....
Fishing nets of cotton	....do	Duty as on the threads of which they are composed.	.....
Tissues, unbleached:			
Of the weight of 13 kilograms or more per 100 square meters that contain in warp and woof on a square of 5 millimeters:			
27 elementary threads or less	....do	$11.96	.....
More than 27 threads	....do	14.28	.....
Of the weight of 7 or more kilograms, but less than 13 per 100 square meters that contain in warp and woof in a square of 5 millimeters:			
27 elementary threads or less	....do	15.44	.....
More than 27 threads	....do	17.75	.....
Of the weight of less than 7 kilograms per 100 square meters that contain in warp and woof in a square of 5 millimeters:			
27 elementary threads or less	....do	19.30	.....
More than 27 threads	....do	23.16	.....
Bleached tissues (unbleached tissues mixed with white are classed as bleached).	....do	20 per cent. more than the duty on untwisted.	.....

*The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS VI.—*Cotton*—Continued.*			
Tissues, colored or dyed	Quintal	$4.82 more per quintal than the duty on unbleached.	
Tissues, printed	do	$13.51 more per quintal than the duty on bleached.	
Tissues, worked	do	20 per cent. more than upon unworked.	
Tissues, brocaded	do	$7.70 more than the duty on the tissue.	
Tissues, embroidered:			
In chain stitch	do	$38.60 more than the duty on the tissue.	
In double stitch (punto passato)	do	$57.90 more than the duty on the tissue.	
Tulles:			
Unbleached	do	$77.20	
Bleached or dyed	do	86.85	
Muslins and tissues in the form of lace:			
Unbleached	do	38.60	
Bleached	do	20 per cent. more than unbleached.	
Dyed	do	$6.75 per quintal more than unbleached.	
Printed	do	$13.51 per quintal more than bleached.	
Worked	do	$3.86 per quintal more than unworked.	
Brocaded	do	$7.72 in addition to the duty on the tissue.	
Embroidered in chain stitch	do	$38.60 in addition to the duty on the tissue.	
Embroidered with double stitch (punto passato)	do	$57.90 in addition to the duty on the tissue.	
Tissues, tarred, oiled, and the like	do	$5.79	
Tissues, waxed	do	11.58	
Buttons		28.95	
Hosiery		28.95	
Guipures		28.95	
Galloons and ribbons		23.16	
Laces		96.50	
Velvets and plush		25.09	
Velvets, unbleached		27.98	
Velvets, bleached		31.84	
Velvets, dyed		41.49	
Velvets, printed			
Tissues mixed with less than 12 per cent. of silk	Quintal	$7.72 per quintal more than the duty on the tissue.	
Tissues mixed with less than 50 per cent. of wool	do	$3.86 per quintal more than the duty on the tissue.	
Tissues mixed with threads of gold or fine silver, or gilded or silvered.	Kilogram	$0.96 in addition to the duty on the tissue.	
Tissues mixed with threads of common metal	do	$0.38 in addition to the duty on the tissue.	
Sewed articles:			
Bags, bed and table linen, etc	Quintal	10 per cent. more than the duty on the tissue.	
All others		40 per cent. more than the duty on the tissue.	
CLASS VII.—*Wool, bristles, and hair.**			
Wool:			
Washed and unwashed	Quintal	Free	
Artificial	do	$1.93	
Dyed	do	1.93	
Combed or carded	do	1.93	
Combed, carded, and artificial, dyed	do	4.86	

* The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS VII.—*Wool, bristles, and hair*—Continued.*			
Waste and refuse wool	Quintal	Free	
Bristles, raw	do	Free	
Bristles, dyed	do	$1.93	
Bristles, twisted cords, and rough articles of hair	do	3.86	
Hair, raw	do	Free	
Hair, dyed	do	$1.93	
Threads of untwisted carded wool, unbleached:			
Up to 10,000 meters per kilogram	do	7.72	
Beyond 10,000 meters per kilogram	do	9.65	
Threads of carded wool:			
Untwisted and bleached	do	20 per cent more than unbleached.	
Dyed	do	$4.82 per quintal more than unbleached.	
Threads of carded wool, twisted		$2.80 per quintal more than unbleached.	
Threads of carded wool, untwisted and unbleached:			
Up to 50,000 meters per kilogram		40.61	
Beyond 50,000 meters per kilogram		12.54	
Threads of combed wool:			
Untwisted and bleached		20 per cent. more than unbleached.	
Dyed		$4.82 per quintal more than unbleached.	
Threads of combed wool, twisted		$2.80 per quintal more than untwisted.	
Woolen tissues, carded:			
Of the weight of 200 grams and less per square meter.		34.74	
Of the weight of more than 200 grams and not more than 500 per square meter.	Quintal	30.88	
Of the weight of 500 grams per square meter	do	27.02	
With warp composed entirely of cotton thread	do	19.30	
Woolen tissues, combed:			
Of the weight of 200 grams and less per square meter.	do	44.34	
Of the weight of more than 200 grams and less than 500 per square meter.	do	38.60	
Of the weight of more than 500	do	32.81	
Woolen tissues:			
Printed	do	$7.72 more per quintal than the duty on the tissues.	
Brocaded	do	do	
Embroidered with chain stitch		$38.60 per quintal more than the duty on the tissue.	
Embroidered with double stitch (punto passato)		$57.90 per quintal more than the duty on the tissue.	
Felt:			
Of the thickness of 3 millimeters	Quintal	Duty as on tissues of carded wool.	
Of the thickness of more than 3 millimeters	do	3.86	
Tissues of coarse hair for sieves	do	5.79	
Tissues, all others	do	31.84	
Hosiery	do	42.40	
Guipures	do	42.40	
Galloons and ribbons	do	46.32	
Buttons	do	46.32	
Laces and tulles	do	9.65	
Covers and carpets:			
Covers of ox, goat, or sheep's hair not dyed, and with warp of linen or of cotton.	do	11.58	
Covers of wool and woolen waste	do	Duty as on tissues according to class.	
Carpets of wool or woolen waste, including those in which other textile materials prevail in weight.	do	21.23	
Tissues with metallic threads	Kilogram	$1.93 more than the duty on the tissues.	
Tissues of gold or fine silver, or gilded or silvered	do		
Tissues of common metal	do	$0.38 more than the duty on the tissue.	
Sewed articles	Quintal	40 per cent. more than the duty on the tissue.	

* The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS VIII.—*Silk.**			
Eggs of silk worms	Kilogram	Free	
Cocoons	Quintal	Free	
Silk, thrown simple or twisted, raw	do	Free	
Silk, thrown simple or twisted, dyed	Kilogram	$0.10	
Sewing-silk	do	.48	
Silk waste:			
Raw	Quintal	Free	
Combed	do	1.93	
Thread	do	2.65	
Velvet and felt of silk:			
Smooth	Kilogram	1.73	
Worked	do	2.31	
Tissues of silk or of filusel:			
Black:			
Smooth	do	1.15	
Worked	do	1.73	
Colored:			
Smooth	do	1.35	
Worked	do	1.93	
Smooth	do	1.73	
Worked	do	2.81	
Velvets mixed, in which the silk or filusel is not less than 12 or more than 50 per cent.:	do		
Smooth	do	1.35	
Worked	do	1.93	
Tissues, mixed, in which the silk or filusel is not less than 12 or more than 50 per cent.:			
Black:			
Smooth	do	.77	
Worked	do	1.35	
Colored:			
Smooth	do	.96	
Worked	do	1.54	
Tissues, embroidered:			
With chain stitch	do	$0.38 more than the duty on the tissue.	
With double stitch (punto passato)	do	$0.57 more than the duty on the tissue.	
Ordinary tissues of silk waste in which the weight exceeds 200 grams per square meter in which there is not less than 12 per cent. of silk waste:			
Smooth	do	.48	
Worked	do	.87	
Ribbons and galloons	do	$0.38 more than the duty on the tissue.	
Hosiery	do	Duty as on the tissue.	
Guipures	do	Same duty as on ribbons.	
Laces and tulles containing not less than 12 per cent. of silk:			
Smooth	do	2.31	
Worked	do	3.47	
With beads over more than one thread of their surface.	do	1.54	
Tissues with metallic threads:			
Tissues of gold or fine silver, or gilded or silvered	do	$1.93 more than the duty on the tissue.	
Tissues of common metal	do	$0.38 more than the duty on the tissue.	
Buttons	do	.96	
Sewed articles	do	40 per cent. more than the duty on the tissue.	
CLASS IX.—*Wood and straw.**			
Charcoal	Ton	Free	
Fire-wood	do	Free	
Wood, common:			
Rough, or rough-hewed with the ax	Cubic meter	.38	
Squared, or sawed lengthwise	do	.57	
In small boards for boxes, sieves, and the like.. also in hoops of any length.	Quintal	.38	

* The conventional duties for this category have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS IX.—*Wood and straw*—Continued.*			
Wood, common—continued:			
For cabinet-makers:			
Not sawed	Quintal	$0.38	
Sawed	do	.77	
In boards or squares, inlaid for floors	do	1.15	
Casks, new and old:			
With wooden hoops	Hectoliters of capacity.	.04	
With iron hoops	do	.06	
Furniture, and parts of, finished or unfinished:			
Not upholstered:			
Of common bent wood	Quintal	3.86	
Of other common wood	do	3.86	
Of cabinet-makers' wood, veneered, carved, or inlaid.	do	11.58	
Upholstered:			
Of common wood	do	7.72	
Of cabinet-makers' wood, veneered, carved, or inlaid.	do	11.58	
Oars, stakes, and poles	do	Free	
Twigs for brushes	do	Free	
Cork:			
Unmanufactured	do	Free	
Manufactured	do	2.89	
Bricks made of the residue of cork	do	.96	
Tools, and variouworks of common wood:			
Plain	do	1.54	
Polished or painted	do	2.31	
Wooden merchandise, common	do	7.72	
Blocks of wood	do	11.58	
Common street carts	Each	4.2	
Common street carriages:			
With not more than two wheels		6.36	
With more than two wheels, and not more than five springs.	Each	21.23	
With more than two wheels, and more than five springs.		63.69	
Ships, barks, and boats	Tons register.	Free	
Canes, reeds, and rushes:			
Unworked (in natural state)	Quintal	Free	
Split	do	1.15	
Wire drawn, or colored	do	3.08	
Basket-work, and mats:			
Coarse	do	1.54	
Fine	do	5.72	
Braids:			
Of straw	do	Free	
Of bark, esparto, etc., for common hats	do	Free	
Of bark, esparto, etc., for fine hats	do	Free	
Of bark, espardo, etc., for cordage, or other purposes.	do	Free	
Cordage of esparto, linden, and the like	do	29	
Hats of straw, except ladies' trimmed hats	Hundred	4.82	
CLASS X.—*Paper and books.**			
Rags (paper intended solely for the paper mill, if unfit for any other use, is admitted free).	Quintal	Free	
Pulp of wood, straw, or like substance	do	.38	
Paper:			
White, or tinted in pulp	do	2.89	
White, ruled	do	3.86	
White, shaped for envelopes	do	4.82	
Colored, gilded or painted. Also wall-paper, including paper intended for lithography or photography.	do	8.68	
Blotting paper	do	2.89	
Coarse wrapping paper, including straw paper not dyed or pressed.	do	1.15	
Playing cards, and cards for *lotto*	100 packs	7.72	
Prints, lithographs, and bills	Quintal	19.30	
Millboard:			
Common	do	1.54	

*The conventional duties for this category have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS X.—*Paper and books.**			
Millboard.—Continued.			
Fine	Quintal	Same as paper of which it is made	.....
Articles of paper or millboard	....do	$15.44	.....
Books and music:			
Printed—unbound or merely stitched	....do	Free	.....
Printed—bound in any way	....do	3.86	.....
Blank books	....do	.....	.....
Unbound, or bound in paper	....do	4.82	.....
All others	....do	7.72	.....
Manuscripts	.. do	Free	.....
CLASS XI.—*Hides.**			
Hides:			
Crude, fresh or dry not fit for furriery	Quintal	Free	.....
Crude, fresh, or dry, fit for furriery	....do	Free	.....
Tanned, with the hair, fine and common	.. do	11.58	.....
Tanned without the hair	.....	.....	.....
Simply tanned, except ovine skins	Quintal	4.82	.....
Simply tanned ovine skins	...do	1.93	.....
Patent leather	...do	15.44	.....
Finished for sole leather	...do	8.68	.....
Finished for other leather	....do	11.58	.....
Goat and lamb skins	....do	3.86	.....
Cut into boot-legs, uppers, etc	... do	20 per cent. more than the duty on the skin.	.....
Hat-bands	... do	40 per cent. more than the duty on the skin.	.....
Scraps	....do	Free	.....
Articles of furriery of all kinds	....do	$115.80	.....
Harness, plain and ornamental	....do	17.37	.....
Saddles	Hundred	289.50	.....
Gloves, of any kind of skin without hair	Hundred pair.	3.86	.....
Shoes and boots of all kinds	....do	38.60	.....
Articles of hide tanned without hair, belt-finished and sewed for conveying power.	Quintal	17.37	.....
All other articles	....do	.....	.....
CLASS XII.—*Minerals, metals, and their work.**			
Metallic minerals:			
Iron	Ton	Free	.....
Lead (also argentiferous lead)	....do	Free	.....
Copper	....do	Free	.....
Zinc	....do	Free	.....
All others	Quintal	Free	.....
Dross	....do	Free	.....
Scraps, scales, and filings of iron and steel	....do	Free	.....
Cast iron:			
In pigs	....do	.19	.....
Manufactured in rough castings:			.....
Objects for furniture, ornament, or domestic use	Quintal	1.54	.....
For other objects	....do	1.93	.....
Manufactured in smooth castings, or turned or otherwise worked:	.....	.....	.....
Objects for furniture, ornamental, or domestic use.	Quintal	1.93	.....
Other objects	...do	1.35	.....
In castings ornamented with other metals, or turned, enameled, nickel-plated, varnished, oxidized, lacquered, etc.:	.....	.....	.....
For furniture, ornament, or domestic use	Quintal	3.47	.....
Other objects	....do	2.31	.....
Iron in masses (not yet free from dross), and steel ingots.	....do	.77	.....
Iron and steel simply rolled or hammered, and not yet tempered:			
In bars, rods, or weights, not having any diameter or side of less than over 5 millimeters.	.. do	1.15	.....
The same, having one or more diameters or side less than 5 millimeters.	... do	1.73	.....
In wires of a thickness less than 1½ millimeters	.. do	2.31	.....

* The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS XII.—*Minerals, metals and their work*—Cont'd.*			
Iron and steel simply rolled or hammered, and not yet tempered—Continued.			
In plates of the thickness of 4 or more millimeters	Quintal	$1.35	.....
In plates of the thickness of less than 4 and more than 1½ millimeters.	....do	1.93	.....
In plates of the thickness of 1½ millimeters and less.	....do	2.31	.....
In pipes of the thickness of 4 millimeters or more	....do	2.31	.....
In pipes of the thickness of less than 4 and more than 1½ millimeters.	....do	2.89	.....
In pipes of the thickness of 1½ millimeters and less.	....do	2.28	.....
Forged into anchors, axles, anvils, and other coarse work:			
Of the weight of 50 kilograms or more	....do	1.73	.....
Of less weight	....do	2.31	.....
Rails	....do	1.15	.....
Iron and steel of second fabrication (meaning iron subjected to other manufacturing operations than those of simple rolling and hammering):			
Made principally of large iron and steel—			
In objects smoothed, filed, turned, pierced, etc., only in a small part of their surface.	....do	1.93	.....
The same smoothed, filed, turned, or pierced in a large part of their surface; also objects turned, leaded, zincked, or varnished.	....do	2.50	.....
In objects oxidized, enameled, nickel-plated or lacquered, ornamented with other metal or united with glass or pottery.	....do	3.86	.....
Made principally of small iron and steel:			
In objects smoothed, filed, turned, pierced, etc., in only a part of their surface.	....do	2.50	.....
The same smoothed, filed, turned, pierced, etc., in a large part of their surface; also, objects turned, leaded, zincked, or varnished.	....do	3.28	.....
In objects oxidized, enameled, nickel-plated or lacquered, ornamented with other metals or united with glass or pottery.	....do	5.79	.....
Iron plates, covered with zinc or lead, or galvanized:			
Plain—			
Of a thickness greater than 1½ millimeters ...	....do	2.50	.....
Of a thickness of 1½ millimeters or less	....do	2.89	.....
Manufactured:			
In various plain works of plates of more than 1½ millimeters in thickness.	....do	3.66	.....
In the same, of plates of 1½ millimeters and less in thickness.	....do	4.05	.....
In works combined with other materials of plates of more than 1½ millimeters in thickness.	....do	4.43	.....
In the same, of plates of thickness of 1½ millimeters and less.	....do	4.82	.....
Iron plates covered with tin or copper, or oxidized:			
Plain—			
Of a thickness greater than 1½ millimeters...	....do	2.70	.....
Of a thickness of 1½ millimeters and less.....	....do	3.08	.....
Manufactured:			
In various plain works of plates of a thickness greater than 1½ millimeters.	....do	3.86	.....
In the same, of plates of the thickness of 1½ millimeters and less.	....do	4.24	.....
In works combined with other materials of plates of a thickness greater than 1½ millimeters.	....do	4.63	.....
In the same, of plates of 1½ millimeters and less.	....do	5.05	.....
Steel, tempered in bars, rods, and wire	....do	2.31	.....
Steel, in springs of every kind	....do	3.47	.....
Tools and instruments for arts and trades in cast-iron, iron, or steel:			
Common—			
Hatchets, plows, axes, ordinary agricultural tools, mattocks, bipointed anvils, wedges, trowels, harrows, forks, etc.	....do	2.50	.....

* The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS XII.—*Minerals, metals and their works*—Cont'd.*			
Tools and instruments for arts and trades in cast-iron, iron, or steel—Continued:			
Common—Continued:			
The same varnished, sinoked, leaded, galvanized, coppered, turned, or partially ornamented with other metal, but not lacquered, enameled, or burnished.	Quintal	$2.89	
The same enameled, lacquered, oxidized, but not burnished (cutlery excluded).	do	3.86	
Fine:			
Small scales, engravers' tools, scissors, etc	do	3.28	
The same enameled, lacquered, oxidized, but not burnished.	do	4.29	
Files and rasps:			
From 1 to 10 cents per linear centimeter	do	2.50	
From 11 to 20 cents per linear centimeter	do	2.89	
Of 21 and more cents per linear centimeter	do	3.86	
Copper, brass, and bronze:			
In pigs, lumps, filings, and scraps	do	.77	
In rods, sheets, and plates	do	2.31	
In pipes	do	3.08	
In wire of a thickness less than 5 millimeters	do	3.86	
Drawn for wire work, coarse	do	3.47	
In ornamented work, neither gilded nor silvered.	do	14.47	
In other work not elsewhere mentioned	do	5.79	
In rods and in wire, gilded or silvered	do	19.30	
Gilded or silvered, wound around threads of textile material.	do	19.30	
Gilded or silvered in other work	do	23.16	
In cylinders and engraved blocks for printing		Free	
Metallic cloth:			
Of iron or steel Of brass or copper	Quintal	$2.31 more per quintal than the duty on the wire.	
Nickel and its alloys with copper or zinc:			
In cubes, pigs, or scraps	do	Free	
In sheets, rods, or threads	do	$1.93	
In silvered or gilded work	do	23.16	
In all other work	do	19.30	
Lead and its alloys with antimony:			
In pigs and scraps	do	0.10	
Hammered, in sheets and pipes	do	0.57	
In printing type	do	3.86	
In all other work, including bullets and shot	do	0.96	
Tin and its alloys with lead and antimony:			
In pigs, rods, and scraps	do	Free	
Hammered, in sheets of any kind	do	2.89	
In other work	do	3.81	
Varnished	do	7.72	
Zinc:			
In pigs and scraps	do	Free	
In plates or sheets	do	0.77	
In works neither gilded, ornamented, or varnished	do	2.89	
In works not gilded with ornaments or varnish	do	9.65	
In gilded work	do	19.30	
Antimony and arsenic in the metallic state	do	0.19	
Mercury	do	1.93	
Works of aluminum bronze	do	23.16	
Metals and alloys not named:			
In the rough state	do	0.96	
In manufactures	do	19.30	
Guns:			
Finished	Hundred	115.80	
Parts of	Quintal	38.60	
Pistols and revolvers:			
Finished	Hundred	67.55	
Parts of	Quintal	135.10	
Articles of burnished iron or steel	do	15.44	
Needles and pins	do	19.30	
Machinery:			
Steam engines, stationary and semi-stationary, with or without boilers.	do	2.31	
Boilers	do	2.31	

* The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS XII.—*Minerals, metals, and their work*—Cont'd.*			
Machinery—Continued:			
Motors, water or wind, and hydraulic machines (turbines), hydraulic wheels, pumps, and elevating machines.	Quintal	$1.93	
Presses, accumulators, elevators, and hydraulic lifts.	....do	2.50	
Locomotives, without tenders	....do	2.50	
Locomotives	....do	2.31	
Marine engines	....do	2.31	
Agricultural machinery of all sorts	....do	1.73	
Machines for spinning	....do	1.93	
Machines and looms for weaving	....do	1.93	
Machine tools for working wood and metals	....do	1.73	
Sewing-machines:			
Without tables, and hand machines	....do	6.75	
With tables	....do	3.08	
Machines not elsewhere named	....do	1.93	
Parts of machinery	....do	1.93	
Apparatus of copper and other metals for heating, refining, distilling, etc.	....do	2.89	
Instruments, optical, mathematical, of precision, of observation, chemical, physical, surgical, etc.:			
For scientific uses	....do	14.47	
All others	....do	5.79	
Mountings for carding and combing machines	....do	12.54	
Railway carriages:			
For freight and tenders	....do	1.93	
First-class carriages	....do	2.70	
Second-class carriages	....do	3.08	
Third-class carriages	....do	3.66	
Gold:			
Rolled, in sheets, and tinsel	Kilogram	1.93	
Twisted over silk	....do	1.93	
Hammered, in sheets	....do	3.47	
Silver:			
Rough, in rod, powder, and scraps	....do	Free	
Rolled, in sheets, and tinsel	....do	.96	
Twisted over silk	....do	1.93	
Hammered, in sheets	....do	.96	
Goldsmith's work and gold plates	....do	2.70	
Manufactures of gold, including gilded and silvered work.	....do	1.73	
Jewels of gold	....do	2.70	
Jewels of silver and silver gilt	....do	1.93	
Watches and clocks:			
Watches in gold cases	Each	.19	
Watches in any other cases	....do	.10	
Clocks:			
Table, and hanging, not in cases	....do	.96	
Table, in cases	....do	$0.96 plus the duty on the case	
Alarm clocks that do not strike the hour	....do	.29	
Barrel organs and musical boxes	....do	.38	
Watch and clock cases:			
For watches	....do	.25	
For house clocks	....do	.38	
For church and town clocks	Quintal	3.86	
Watch and clock movements	....do	19.30	
CLASS XIII.—*Stone, earth, pottery, and glass.**			
Precious stones, manufactured:			
Rubies, emeralds, diamonds, etc	Hectogram	2.70	
Agates, opals, onyx, etc	Kilogram	1.73	
Marble, rough	Ton	Free	
Alabaster, rough	Quintal	Free	
Marble and alabaster of whatever quality:			
In slabs of the thickness of 16 centimeters and over.	....do	.10	
In statues	....do	Free	
In other work	....do	.15	

* The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS XIII.—*Stone, earth, pottery, and glass*—Cont'd.*			
Stone for building:			
Rough	Tons	Free	
In statues	do	Free	
Sawed, cut, and polished	do	$0.19	
Earth, colored (boles, ochre, and natural or artificial)	Quintal	Free	
Stones, earth, and minerals, non-metallic:			
Plaster of Paris, lime, etc	Ton	Free	
Cement and hydraulic lime	Quintal	.24	
Bricks:			
Bricks, common roof-tiles, rough floor-tiles, and refuse bricks.	do	.05	
Tiles of the Marseilles and Paris pattern and and pierced bricks.	do	.24	
Sulphur, crude and refined, and flowers of sulphur	do	Free	
Solid bitumen	do	.10	
Coal (mineral) and coke	Ton	Free	
Graphite	Quintal	Free	
Terra cotta:			
For common use, smooth tiles, architectural decorations, stoves, jars, etc., plain.	do	.57	
All other terra cotta, ornamented	do	3.47	
Majolica, or manufactures of colored earthenware covered with enamel or opaque varnish:			
Tiles, painted in several colors, and also common *grès*.	do	1.50	
White or colored (plain ground)	do	1.93	
Variously colored, or colored in any other way	do	2.70	
Pottery, or manufactures of, in white paste:			
White and fine *grès*	do	3.47	
Variously colored or painted, or gilded, or otherwise decorated.	do	4.82	
Porcelain:			
White	do	4.82	
Colored, gilded, or otherwise decorated	do	7.72	
Shee s of glass or crystal:			
Not polished:			
Common window glass that measures in length and width together less than 120 centimeters.	do	1.54	
Common window glass measuring from 120 to 200 centimeters.	do	1.93	
Common window glass measuring more than 200 centimeters.	do	2.31	
All other, common window glass excluded	do	1.54	
Polished:			
Not tinned, measuring in width and length combined not more than 160 centimeters.	do	4.24	
Not tinned, measuring in width and length combined more than 160 centimeters.	do	5.40	
Mirrors framed, and looking-glass polished and tinned that measure in length and breadth combined not more than 160 centimeters.	do	7.72	
Mirrors framed, and looking-glass polished and tinned that measures in length and breadth combined more than 160 centimeters.	do	9.65	
Manufactures of glass and crystal:			
Simply blown or molded, not colored, nor ground, nor cut.	do	2.31	
Colored, tinted in the paste, ground, polished, and cut.	do	3.47	
Painted, enameled, gilded, silvered, or otherwise decorated.	do	4.82	
Bottles, common	do	0.96	
Demijohns	do	1.15	
Broken glass	do	Free	
Glass, crystal, or enameled in jet; cut like gems, or in pieces for chandeliers, and the like.	do	0.10	
Vitrification, and enamel in cakes, sticks, or powder	do	0.96	
CLASS XIV.—*Cereals, flour, Italian paste, and vegetable products not included in other categories.*			
Wheat	Ton	2.70	$2.70
Corn	do		2.70

* The conventional duties for this class have not yet been published.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS XIV.—*Cereals, flour, Italian paste, and vegetable products not included in other categories*—Cont'd.			
Barley	Ton	$2.32	Free.
All other	do	2.22	$2.22
Oats	do	2.22	2.22
Chestnuts	do	Free	Free.
Potatoes	do	Free	Free.
Rice, with and without husk	do	Free	Free.
Flour, except wheat meal (semolino)	do	0.61	0.54
Wheat meal (semolino)	Quintal	0.77	0.54
Bran	do	0.19	0.16
Maccaroni (Italian paste)	do	1.15	1.06
Sea-biscuit	do	1.15	1.06
Fecula	do	0.38	Free.
Starch:			
Common	do	1.15	0.87
Fine, in boxes	do	1.93	0.87
Oranges and lemons, also in brine	do	0.77	0.77
Citrons and limes, also in brine	do	Free	Free.
Fresh grapes	do	1.45	Free.
Other fresh fruit not elsewhere named	do	0.19	Free.
Dates	do	2.31	Free.
Carub beans	do	0.34	0.34
Pistachio nuts, with or without shells	do	1.54	1.54
Dried fruit:			
Almonds, without shells	do	Free	Free.
Almonds, with shells	do	Free	Free.
Small nuts	do	Free	Free.
Oily nuts, not otherwise named	do	Free	Free.
Figs	do	2.89	1.93
Grapes	do	3.86	1.93
All other	do	1.93	0.38
Fruits, vegetables, and greens:			
In vinegar, salt, or oil	do	2.31	1.54
In alcohol	do	7.72	7.72
Mushrooms and truffles	do	1.93	1.93
Hops	do	Free	Free.
Seeds, oily, and others	do	Free	Free.
Palm oil and oil of cocoa	do	Free	Free.
Oil cake of all kinds			
Vegetable products:			
Fresh vegetables and fresh greens	Quintal	Free	Free.
All others	do	Free	Free.
CLASS XV.—*Animals and animal products not included in other categories.*			
Horses	Each	$3.86	Free.
Mules	do	1.15	$1.15
Asses	do	.29	.29
Oxen	do	4.24	3.47
Bulls (having lost their milk teeth)	do	3.47	3.47
Cows (having lost their milk teeth)	do	1.45	1.45
Steers and bullocks (having some milk teeth)	do	1.54	1.16
Calves (having all their milk teeth)	do	.96	.38
Goats and sheep	do	.19	.04
Hogs, weighing 20 kilograms and less	do	.10	.19
Hogs, weighing more than 20 kilograms	do	.67	.67
Meat:			
Fresh meat and poultry	Quintal	.96	.96
Salted, smoked, or otherwise preserved	do	4.82	3.86
Cooked	do	.96	.96
Extract of meat, or meat jelly	do	7.72	7.72
Game	do	2.89	2.89
Blood suckers	do	Free	Free.
Intestines:			
Fresh	do	Free	Free.
Salted	do	.77	.77
Fish:			
Fresh	do	Free	Free.
Dried or smoked	do	.96	.96
In brine	do	1.15	1.15
Seasoned, in oil	do	1.93	1.93
Seasoned, preserved in boxes	do	4.82	1.93
Caviary, and other prepared fish eggs	do	5.79	5.79
Milk	do	Free	Free.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS XV.—*Animals and animal products not included in other categories*—Continued.			
Extract of milk, with sugar	Quintal	Free	$2.89
Extract of milk, without sugar	do	Free	1.54
Butter, fresh	do	$1.93	.96
Butter, salted	do	2.89	2.89
Cheese	do	3.86	1.54
Eggs (of fowls)	do	Free	Free.
Hog's fat (lard)	do	1.93	.19
Other fat	do	Free	.19
Stearic acid	do	1.54	1.54
Stearine candles	do	2.89	2.89
Bees	do	Free	Free.
Honey, of every sort	do	1.93	.96
Wax:			
Yellow, not manufactured	do	2.89	2.89
Yellow, manufactured	do	3.86	3.86
White, not manufactured	do	5.79	5.79
White, manufactured	do	7.72	7.72
Remains and drippings of candles	do	1.93	1.93
Glue:			
Strong	do	.77	.77
Fish glue	do	2.89	1.93
Feathers:			
For ornament, unmanufactured	Kilogram	.57	.57
For ornament, manufactured	do	6.75	2.89
For beds	do	Free	Free.
Hair:			
Not manufactured	do	.57	.57
Manufactured	do	1.93	1.93
Sponges:			
Common:			
Crude	Quintal	Free	3.86
Manufactured	do	4.82	
Fine:			
Crude	do	6.75	19.30
Manufactured	do	19.30	
Coral:			
Unmanufactured	Kilogram	Free	Free.
Manufactured, if not mounted with gold	do	1.93	1.93
Ivory, mother of pearl and tortoise shell:			
Unmanufactured	Quintal	Free	Free.
Manufactured	do	28.95	28.95
Horns, bones, and the like:			
Unmanufactured	Ton	Free	Free.
Manufactured	Quintal	15.44	
Amber, and its manufactures	do	28.95	28.95
Manure	Ton	Free	Free.
CLASS XVI.—*Various objects.*			
Haberdashery:			
Common	Quintal	15.44	12.74
Fine	do	28.95	19.30
Fans:			
Ordinary	do	17.37	17.37
Fine	do	38.60	28.95
Musical instruments:			
Organs:			
For churches	do	3.08	2.31
Portable organs	Each	.96	.96
Piano-fortes:			
Square and upright	do	17.37	11.58
Grand pianos	do	34.74	14.47
Harmoniums	do	7.72	3.86
Stringed instruments not otherwise mentioned:			
Weighing 400 grams and less	do	.38	.19
Weighing more than 400 grams	do	.77	.19
Wind instruments not otherwise mentioned:			
Weighing 400 grams and less	do	.38	.19
Weighing more than 400 grams	do	.77	.19
All others	do	.38	.19
Parts of musical instruments	Quintal	19.30	11.58
Strings of musical instruments	do	15.44	*11.58 to *19.30

*According to quality.

STATEMENT No. 48.—*Italian customs tariff, etc.*—Continued.

Articles.	Unit.	General duties.	Conventional duties.
CLASS XVI.—*Various objects*—Continued.			
India rubber and gutta-percha:			
Crude, solid, or liquid	Quintal	Free	Free.
In sheets sawed and in articles made of sawed sheets.	....do	$11.58	Free.
In threads	....do	9.65	$6.17
In other manufactures, including those of ebonite, and excluding those of india rubber mixed with tissues in metals.	....do	9.65	6.17
In tubes and sheets containing metallic thread or metallic cloth.	....do	7.72	6.17
Combined with tissues in manufactures of every form, excluding gummed tissues, and clothing.	....do	11.58	6.17
Manufactured in guipures, in ribbons, and in elastic tissues.	....do	27.02	22.14
Insulated electric wires and cables:			
Of one or more metallic conductors, covered with textile materials and varnished, or with gutta-percha or india rubber.	..do	11.58	*2.26 to *2.70
Cables formed of one or more conductors covered with insulating material, protected with iron or any other metal, including submarine cables.	..do	5.79	*2.26 to *2.70
Capes	Hundred	19.30	19.30
Hats:			
Of pure silk, or mixed with other material, except ladies' trimmed hats.	....do	28.95	28.95
Of any other material except straw, except ladies' trimmed hats.	....do	19.30	19.30
Ladies' trimmed hats	....do	96.50	96.50
Artificial flowers	Kilogram	2.89	1.16
Stock for artificial flowers	....do	.96	.96
Frames, for articles of fashion	....do	.19	.19
Umbrellas, of silk	Hundred	27.02	23.16
Umbrellas, all others	....do	15.44	11.58
Umbrella stock	Quintal	5.79	5.79
Paint-brushes, with or without handles	....do	3.86	3.86
Objects for collections, and of art:			
Pictures by living artists	Ad valorem	Free	Free.
All others	Quintal	Free	Free.
CLASS XVII.—*Precious metals.*			
Gold:			
Unmanufactured, in rods, powder, or scraps	Kilogram	Free	Free.
Coin	....do	Free	Free.
Silver, in coin of the Latin Union	....do	Free	Free.

TREATIES.

On May 28, 1885, a treaty between Italy and Zanzibar was signed, but it was not officially promulgated until January 7, 1887. The main premises of this treaty are as follows:

Full liberty is given to subjects of each power to enter, reside, and trade in the territory of the other power; and in each country the subjects of the other shall enjoy all the privileges in regard to trade and commerce that are accorded to the subjects of the most favored nation.

No one can enter the house or shop of an Italian in Zanzibar without his consent except by the intervention of the Italian consul.

No Italian can be detained in Zanzibar against his will.

These same privileges will be extended in Italy to subjects of Zanzibar.

The subjects of Zanzibar employed by Italians resident there will have the same protection as Italians, but if such subjects are guilty

of crime they must be discharged by their employers, and will then be under the jurisdiction of the local authorities.

The Zanzibar authorities can not intervene in disputes between Italian subjects, or between Italians and subjects of other Christian nations.

In disputes between subjects of Zanzibar and Italians jurisdiction will belong to the Italian consul if the aggressor is a subject of Zanzibar. If the aggressor is an Italian jurisdiction will belong to the Italian consul, whether the other party is a subject of Zanzibar or of any other Mahometan power.

In disputes between Italians and subjects of Zanzibar, no witness who has previously been convicted of testifying falsely will be allowed to testify.

The Zanzibar authorities will aid in collecting debts due from a subject of Zanzibar to an Italian; and the Italian consul will aid in collecting debts due from an Italian to a subject of Zanzibar.

Italian subjects will pay the same custom and port dues as those paid by subjects of the most favored nation.

No articles of commerce shall be forbidden to be imported into or exported from the Zanzibar dominions.

Italians shall have the right to establish depots and magazines of supplies in any part of Zanzibar. The same right is accorded to subjects of Zanzibar in Italy.

No other treaties have gone into operation between July 1, 1886, and June 30, 1887.

REVENUE AND EXPENDITURES.

STATEMENT No. 49.—*Revenue and expenditures of the Italian Government for the fiscal year ending June 30, 1887.*

Receipts.	Amount.	Receipts.	Amount.
ORDINARY REVENUE.		*Public service.*	
Direct taxes.		Posts	$8,136,817
Rents for state property	$14,390,053	Telegraphs (state)	2,605,415
Land tax and building tax	35,321,460	Other services	3,852,287
Income tax	40,654,351	Re-imbursements	4,438,238
Business taxes.		Miscellaneous receipts	1,768,105
		Drawbacks	17,997,708
Administration tax of the ministry of finance	36,446,337	Total	296,738,391
Tax on railway traffic	3,147,854	EXTRAORDINARY REVENUE.	
Legation and consular fees	117,449		
Excise and customs.		Amount repaid to the city of Ancona on octroi tax	5,790
		Re-imbursements	1,754,999
Taxes on the manufacture of spirits, beer, sugar, etc	6,757,735	Various receipts	24,569
Customs and maritime dues	42,752,617	Sales of property and franchises	3,445,330
Octroi duties	15,573,788	Recovery of debts	497,555
Tobacco (monopoly)	36,676,298	Arrears of debts	4,245,469
Salt (monopoly)	11,379,304	Recuperations	3,045,337
		Railway construction	37,874,188
Miscellaneous taxes.		Total	50,893,237
Fines and penalties	2,057		
State lottery	14,720,518	Total, ordinary and extraordinary	347,631,628

Expenditures for fiscal year ending June 30, 1887.

Expenditure.	Amount.
Departments:	
Treasury	$144,892,756
Finances	34,952,269
Grace and justice	6,534,064
Foreign affairs	1,485,862
Public instruction	7,189,061
Interior	12,815,622
Public works	61,482,197
War	53,039,714
Navy	19,237,763
Agriculture, industry, and commerce	2,771,461
Total	344,391,769
Total receipts	347,631,628
Total expenditures	344,391,769
Excess of receipts over expenditures in the fiscal year ending June 30, 1887	3,239,859

PUBLIC DEBT.

On the 30th of June, 1887, the public debt of the Kingdom of Italy, including the floating debt, was $2,213,407,094, with annual interest amounting to $100,197,766.

The debt was composed as follows:

Consolidated debt at 5 and 3 per cent	$1,742,203,868
Permanent rents in the name of the Holy See	12,448,500
Debts separately inscribed in the Great Book	174,805,253
Various debts (railway obligations, etc.)	240,043,172
Floating debt	43,906,301
Total	2,213,407,094

The prices of Italian 5 per cent. bonds on the Roman bourse during the year (including accrued interest) were as follows:

Highest price	102.87
Average price	99.63
Lowest price	96.21

Respectfully submitted.

W. L. ALDEN,
Consul-General.

CONSULATE-GENERAL OF THE UNITED STATES,
Rome, December 31, 1887.

THE UNITED KINGDOM IN 1887.

REPORT OF CONSUL-GENERAL WALLER

TRADE IN 1886–'87.

I regret that the prediction of the last annual report that the year 1886 would be likely to exhibit a better trade record than its predecessor, has not been realized. While there was, in 1886, as appears by the tables hereafter given, an increase in the volume of exports and a decrease in the volume of imports, the aggregate value of the exports was 1 per cent. less and of imports 7 per cent. less than the year before.

It will be observed that there was an increase of 17 per cent. in the value of exports to the United States, and a decrease of nearly 6 per cent. in the value of imports from our country. This increase was very generally distributed through the list of the goods exported, the largest percentages, however, occurring in iron, woolens, linens, machinery, and silk manufactures. The principal decrease in the American importations, amounting to nearly 50 per cent. of the whole decrease, was in breadstuffs.

In 1885 the balance of trade in favor of the United States was $322,424,960, but the changes in the course of trade to which I have alluded reduce this balance for 1886 to $273,876,605. Last year the ratio of exchange between the two countries was nearly 4 to 1. This year it is hardly 3 to 1 in favor of the United States.

It will of course be remembered that these observations apply to the calendar year of 1886, governmental statistics of trade not being obtainable at present for a later period.

The returns for the year 1887, derived from authentic but unofficial sources, indicate a general revival of trade in the Kingdom, more especially in metals, cottons, and woolens. This revival began in the closing part of 1886 and continued with some fluctuations until December, 1887, when it became pronounced and apparent.

The prosperity in shipping and ship-building which began to be felt in the middle of 1887 continued, to the great encouragement of the country, throughout the year. Even in agriculture an authority on the subject says in the columns of the Times:

> The great depression has by no means left us; low prices rule both for the purchases and the sales, but over large districts farm management is slowly but surely adapting itself to the altered times, and it may be safely asserted that the year 1887 has seen a greater amount of profitable agriculture than has been the case in any year since the disastrous one of 1879. Not that large profits are being made—a low range of prices will not admit of these—neither can we expect that with a world-wide competition and increasing facilities of transport these will ever again be possible. Neither do the few get rich quickly. All that can be said is that the indications of 1887 are that the larger number of smaller tenants are gradually—and in proportion as they realize that wheat has ceased to be the dominating factor in our agriculture, and that diversified and dairy farming occupies its place—finding that the soil of Great Britain is once again yielding a living profit.

The discontent naturally produced by the long continued depression in business has shown itself in the politics of the Kingdom. At public meetings held to discuss the situation resolutions have been passed favoring fair trade or protective legislation, but the great leaders of public opinion in both the Liberal and Conservative parties have so emphatically condemned the proposal that the agitation has already substantially ceased.

The most important commerical enactment of the year is called the "merchandise marks act." The mischief, now really serious, it is intended to remedy is the offering of foreign goods, especially from Germany and France, in the markets of the Kingdom, bearing trade-marks or trade descriptions in fraudulent imitation of goods of English origin and manufacture. This act is so sweeping and in its penalties so severe that its provisions should be known to American importers of goods into this country, some of whom, though innocent of fraudulent intention, have suffered inconvenience in consequence of it.

A report upon this act and the regulations issued by the customs authorities in regard to it have already been forwarded by Mr. Folsom, our consul at Sheffield.

IMPORTS AND EXPORTS.

The total amount of imports into the United Kingdom from foreign countries and British possessions for the year 1886 was $1,749,317,360, a decrease of $105,517,405 from the year before. A falling off in foreign importations accounts for $92,933,965, or 7 per cent., and a falling off of $12,588,450, or 3 per cent., in colonial importations accounts for the balance.

A notable increase of importations took place in raw cotton and wool. The increase in raw cotton was, in quantity, 2,500,000 hundredweight, and in value $8,250,000. In wool, in weight 90,000,000 pounds, and in value $7,000,000. The most marked decrease in importations occurred in corn, flour, wheat and breadstuffs, amounting in quantity to nearly 18,000,000 hundred-weight and in value to $48,500,000.

The total value of exports in 1886 was $1,343,335,085, a decrease of 1 per cent., or $13,683,385, for the year. Twenty-two per cent. of this decrease, or $3,058,730, appears in the exportations of British produce, and 78 per cent., or $10,624,655, in the exportation of foreign and colonial produce.

In reviewing the tables it will be noticed that the quantity of nearly all English and Irish exportations is greater, while their value is less, than the year before. This is especially so in the exportation of cotton goods, which shows an increase in weight of 8,500,000 pounds, but a decrease in value of $1,900,000. The same is true of the exportations of foreign and colonial produce. In wool there is an increase in weight of 44,500,000 pounds, but a decrease of $10,000,000 in value, while in tea there is an increase of 2,500,000 pounds in weight, but $75,000 decrease in value.

Aggregate imports into the United Kingdom in 1886.

Description.	Quantities.	Values.
Animals:		
Oxen, bulls, cows, and calves ..... number..	319,622	$25,344,230
Sheep and lambs ..... do....	1,038,965	10,050,970
Bacon and hams ..... cwts..	4,210,829	42,014,140
Beef ..... do....	997,590	10,893,385
Bones, except whalebone ..... tons..	66,778	1,845,010
Brimstone ..... cwts..	636,396	789,595
Bristles ..... pounds..	2,660,509	1,836,195
Butter ..... cwts..	1,543,566	40,707,190
Butterine ..... do....	887,974	14,811,320
Candles ..... do....	58,242	718,260
Caoutchouc ..... do....	194,748	11,110,780
Cheese ..... do....	1,734,890	19,356,795
Chemical products	.....	6,422,685
China, porcelain, and earthernware ..... cwts..	157,043	2,607,090
Clocks ..... number..	839,934	1,906,825
Cocoa ..... pounds..	25,363,443	4,149,700
Coffee ..... cwts..	1,006,543	16,475,140
Confectionery and succades ..... do....	418,229	4,830,920
Corn:		
Wheat ..... do....	47,435,806	89,548,150
Barley ..... do....	13,713,637	19,810,205
Oats ..... do....	13,485,233	19,868,915
Maize ..... do....	31,911,565	38,087,350
Other kinds ..... do....	5,257,535	8,149,785
Flour of wheat ..... do....	14,689,560	41,140,255
Flour of other kinds ..... do....	467,932	1,136,235
Total of corn	126,061,268	217,740,895
Cotton, raw ..... cwts..	15,312,900	190,640,550
Cotton manufactures	.....	9,294,590
Drugs:		
Bark, Peruvian ..... cwts..	145,367	4,006,765
Opium ..... pounds..	521,124	1,538,330
Unenumerated	.....	3,349,895

Aggregate imports into the United Kingdom in 1886—Continued.

Description.	Quantities.	Values.
Dyeing or tanning stuffs:		
Cochineal, granilla, and dust ..... cwts..	14,941	$478,440
Cutch and gambier ..... tons..	28,352	3,271,090
Extracts	.....	1,858,945
Indigo ..... cwts..	35,308	9,537,775
Dyes from coal tar	.....	2,546,750
Madder, madder root, garancine, and munjeet ..... cwts..	21,395	134,060
Sumac ..... tons..	13,083	892,320
Valonia ..... do....	34,227	2,419,555
Unenumerated ..... cwts..	1,313,461	3,749,710
Dye-woods ..... tons..	78,064	2,079,455
Eggs ..... thousand..	1,035,171	14,420,315
Feathers, ornamental ..... pounds..	689,340	6,437,975
Fish ..... cwts..	1,679,197	10,791,615
Flax and Hemp:		
Flax, dressed and undressed ..... do....	1,002,381	10,405,620
Tow or codilla of flax and hemp ..... do...	363,006	2,139,005
Hemp and other like substances (except jute) ..... do....	1,219,751	8,675,285
Dressed and undressed jute ..... do....	5,349,109	15,031,475
Flowers, artificial	.....	1,362,165
Fruits:		
Currants ..... cwts..	841,060	5,393,110
Raisins ..... do...	493,673	4,064,940
Oranges and lemons ..... bushels..	4,388,291	7,441,705
Raw, exclusive of nuts ..... do....	5,802,704	10,736,545
Glass of all kinds ..... cwts..	1,471,275	7,723,060
Guano ..... tons..	69,209	2,702,585
Gum of all sorts ..... cwts..	315,893	5,231,725
Gutta-percha ..... do....	40,697	1,349,040
Hair, goats' hair or wool ..... pounds..	19,527,200	5,727,725
Hair, manufactures of	.....	498,715
Hides, raw, dry, or wet ..... cwts..	1,220,897	18,052,495
Hops ..... do....	153,759	2,236,265
Lace and articles thereof	.....	6,553,195
Lard ..... cwts..	895,463	7,723,160
Leather ..... pounds..	77,810,381	27,681,125
Leather gloves ..... pairs..	16,888,732	7,633,810
Meat:		
Unenumerated, salted or fresh ..... cwts..	694,975	7,584,255
Preserved other than salted ..... do....	431,992	5,848,885
Metals:		
Copper ore and regulus ..... tons..	152,415	10,583,075
Wrought, part wrought, and old copper ..... do....	45,185	9,421,505
Iron ore ..... do....	2,878,469	9,473,130
Iron in bars ..... do....	105,466	4,785,285
Iron and steel, wrought or manufactured ..... cwts..	3,537,652	11,001,325
Lead, pig and sheet ..... tons..	107,862	6,866,510
Silver ore	.....	5,152,440
Tin, in blocks, ingots, bars, or slabs ..... cwts..	481,528	11,590,350
Zinc, crude, in cakes ..... tons..	54,121	3,874,690
Zinc manufactures ..... cwts..	363,629	1,630,020
Musical instruments	.....	3,649,025
Nuts and kernels used for extracting oil therefrom ..... tons..	52,804	2,992,645
Oils:		
Fish ..... tons..	15,834	1,809,735
Palm ..... cwts..	1,004,419	5,252,295
Cocoanut ..... do....	156,775	1,071,730
Olive ..... tons..	20,664	3,956,225
Seed ..... do....	16,315	1,980,630
Turpentine ..... cwts..	294,451	1,959,350
Oil-seed cake ..... tons..	296,480	2,438,315
Onions, raw ..... bushels..	3,633,587	2,533,550
Painters' colors	.....	3,890,135
Paper:		
For printing or writing ..... cwts..	305,322	2,381,920
Other (except hanging) ..... do ..	1,205,419	5,055,185
Petroleum ..... gallons..	71,251,736	10,456,380
Pork ..... cwts..	371,696	3,157,600
Potatoes ..... do....	2,707,889	3,996,325
Poultry, game, and rabbits	.....	3,198,520
Pyrites of iron or copper ..... tons..	556,988	5,149,195
Rags and paper-making materials:		
Rags ..... do....	36,604	2,278,705
Esparto and other materials ..... do ...	312,814	8,621,065
Rice ..... cwts..	6,557,213	12,257,880
Rosin ..... do....	1,168,555	1,461,145
Saltpeter ..... do....	270,876	1,200,830
Saltpeter, cubic niter ..... do....	1,500,897	3,729,700
Seeds:		
Clover grass ..... cwts..	289,004	2,948,930
Cotton ..... tons..	254,613	7,458,350

Aggregate imports into the United Kingdom in 1886—Continued.

Description.	Quantities.	Values.
Seeds—Continued.		
Flax or linseed ..... quarters..	2,072,011	$21,233,775
Rape ..... do....	372,318	2,533,420
Silk:		
Knubs or husks and waste ..... cwts..	68,026	4,078,710
Raw ..... pounds..	2,230,900	7,657,625
Thrown ..... do....	253,215	1,184,305
Manufactures	.....	53,418,275
Skins and furs:		
Goat, undressed ..... number..	5,158,176	2,728,440
Seal ..... do....	717,121	2,922,715
Sheep and lamb, undressed ..... do....	8,418,349	4,430,135
Furs of all sorts ..... do....	20,128,949	4,087,825
Spices:		
Cinnamon ..... pounds..	1,752,283	294,545
Pepper ..... do....	28,204,132	4,345,970
Of all other sorts ..... do....	22,492,723	2,220,550
Spirits:		
Rum ..... proof gallons..	5,100,010	2,016,745
Brandy ..... do....	3,120,820	7,102,880
Other ..... do....	2,657,597	1,918,765
Total of spirits ..... do....	10,878,227	11,038,390
Sugar:		
Refined and candy ..... cwts..	6,372,050	26,603,175
Unrefined ..... do....	16,133,661	52,705,745
Molasses ..... do....	430,490	688,815
Tallow and stearine ..... do....	1,011,911	6,496,070
Tea ..... pounds..	230,669,292	56,587,090
Teeth, elephant, sea-cow, and sea-horse ..... cwts..	9,466	2,242,875
Tobacco:		
Manufactured, cigars and snuff ..... pounds..	3,566,889	6,034,255
Unmanufactured ..... do....	83,217,982	12,542,630
Toys	.....	3,091,880
Watches	.....	3,558,560
Wine	14,552,864	25,576,905
Wood and lumber:		
Hewn ..... loads..	1,582,762	17,111,180
Sawn or split ..... do....	3,785,786	41,027,460
Staves ..... do....	130,717	2,660,585
Mahogany ..... tons..	48,732	2,014,675
Wool—sheep, lamb, alpaca, and the llama tribe ..... pounds..	596,470,995	112,825,200
Woolen rags ..... tons..	30,526	3,191,370
Woolen, manufactures	.....	40,338,880
Woolen and worsted yarn:		
Berlin wool and yarn used for fancy purposes ..... pounds..	1,420,393	1,319,100
Yarn for weaving ..... do....	18,620,957	11,143,575
Yeast, dried ..... cwts..	296,682	4,087,670
All other articles	.....	136,174,980
Total	.....	1,749,317,360

Principal articles of import into the United Kingdom in 1886 *compared with* 1885.

Description.	Increase.	Decrease.
Animals:		
Oxen, bulls, cows, and calves ..... number..	.....	53,456
Sheep and lambs ..... do....	288,079	.....
Bacon and hams ..... cwts..	152,375	.....
Beef ..... do....	.....	144,276
Bones, except whalebone ..... tons..	.....	7,045
Brimstone ..... cwts..	.....	83,652
Bristles ..... pounds..	.....	294,231
Butter ..... cwts..	.....	857,807
Butterine ..... do....	887,974	.....
Candles ..... do....	.....	6,409
Caoutchouc ..... do....	14,607	.....
Cheese ..... do....	.....	98,942
China, porcelain, and earthenware ..... do....	10,213	.....
Clocks ..... number..	54,488	.....
Cocoa ..... pounds..	1,948,551	.....
Coffee ..... cwts..	.....	28,019
Confectionery and succades ..... do....	55,795	.....

Principal articles of import into the United Kingdom, etc.—Continued.

Description.		Increase.	Decrease.
Corn:			
Wheat	cwts.		14,063,058
Barley	do.		1,652,523
Oats	do.	428,044	
Maize	do.		515,170
Other kinds	do.		766,208
Flour of wheat	do.		1,143,283
Flour, other kinds	do.		298,997
Total of corn	do.		17,951,195
Cotton, raw	do.	2,582,397	
Drugs:			
Bark, Peruvian	do.	17,263	
Opium	pounds.		188,975
Dyeing or tanning stuffs:			
Cochineal, granilla, and dust	cwts.	713	
Cutch and gambier	tons.	2,040	
Indigo	cwts.		9,006
Madder, madder root, garancine, and munjeet	do.		3,326
Shumach	do.	1,926	
Valonia	do.	4,740	
Unenumerated	do.		38,602
Dyewoods	tons.		17,476
Eggs	thousand.	32,383	
Feathers, ornamental	pounds.		61,921
Fish	cwts.	158,627	
Flax and hemp:			
Flax, dressed and undressed	do.		369,830
Tow or codilla of flax and hemp	do.		21,215
Hemp and other like substances (except jute), dressed and undressed	cwts.		231,980
Jute	do.		364,366
Fruits:			
Currants	do.		287,317
Raisins	do.		97,561
Oranges and lemons	bushels.	31,552	
Raw, exclusive of nuts	do.	652,708	
Glass	cwts.		51,119
Guano	tons.	43,951	
Gums	cwts.		84,305
Gutta percha	do.		13,142
Hair, goats', or wool	pounds.	5,150,000	
Hides, raw, dry and wet	cwts.		9,138
Hops	do.		113,193
Lard	do.	24,253	
Leather	pounds.		3,036,084
Leather gloves	pairs.	453,276	
Meat:			
Unenumerated, salted or fresh	cwts.	94,331	
Preserved, other than salted	do.		95,767
Metals:			
Copper ore and regulus	tons.		37,158
Copper, unwrought part wrought and old copper	do.	1,188	
Iron ore	do.	53,871	
Iron in bars	do.		17,131
Iron and steel, wrought or manufactured	cwts.	62,717	
Lead, pig and sheet	tons.		150
Tin, in blocks, ingots, bars, or slabs	cwts.		27,794
Zinc, crude, in cakes	tons.		6,008
Zinc, manufactures	cwts.		29,653
Nuts and kernels used for expressing oil therefrom	tons.		2,926
Oils:			
Fish	do.		2,546
Palm	cwts.	99,980	
Cocoanut	do.		28,721
Olive	tons.		3,563
Seed	do.	3,375	
Turpentine	cwts.		13,872
Oil-seed cake	tons.	13,520	
Onions, raw	bushels.	95,971	
Paper:			
For printing or writing	cwts.	44,502	
Other (except hanging)	do.	80,605	
Petroleum	gallons.		2,621,905
Pork	cwts.		11,940
Potatoes	do.	407,955	
Pyrites of iron or copper	tons.		97,533
Rags and paper-making materials:			
Rags	do.	1,134	
Esparto and other materials	do.	13,714	

Principal articles of import into the United Kingdom, etc—Continued.

Description.		Increase	Decrease.
Rice	cwts.	68, 563	
Rosin	do.		153, 799
Saltpeter	do.		53, 861
Saltpeter, cubic niter	do.		746, 888
Seeds:			
Clover and grass	do.		26, 694
Cotton	tons.		15, 873
Flax or linseed	quarters.	25, 659	
Rape	do.		167, 507
Silk:			
Knubs, or husks, and waste	cwts.	14, 979	
Raw	pounds.	149, 300	
Thrown	do.	22, 916	
Skins and furs:			
Goat, undressed	number.		533, 483
Seal	do.	136, 403	
Sheep and lamb, undressed	do.		107, 313
Furs of all sorts	do.		4, 703, 009
Spices:			
Cinnamon	pounds.	154, 779	
Pepper	do.		3, 384, 738
All other sorts	do.	2, 275, 724	
Spirits:			
Rum	gallons.		1, 777, 571
Brandy	do.	337, 764	
Other	do.	502, 516	
Total	do.		877, 291
Sugar:			
Refined and candy	cwts.	1, 043, 004	
Unrefined	do.		3, 282, 898
Molasses	do.	37, 615	
Tallow and stearine	do.	2, 951	
Tea	pounds.	18, 525, 472	
Teeth, elephant, sea-cow, and sea-horse	cwts.		430
Tobacco:			
Manufactured cigars and snuff	pounds.		680, 368
Unmanufactured	do.	4, 094, 643	
Wine	gallons.		76, 874
Wood and timber:			
Hewn	loads.		353, 092
Sawn or split	do.		443, 722
Staves	do.	5, 868	
Mahogany	tons.		7, 321
Wool, sheep, lamb, alpaca, and the Llama tribe	pounds.	90, 783, 405	
Woolen rags	tons.		2, 116
Woolen and worsted yarns:			
Berlin wool and yarns used for fancy purposes	pounds.	164, 968	
Yarn for weaving	do.	3, 988, 304	
Yeast, dried	cwts.	3, 444	

Aggregate exports from the United Kingdom in 1896.

BRITISH AND IRISH PRODUCE.

Articles.		Quantities.	Values.
Alkali	cwts.	6, 242, 600	$8, 940, 390
Animals, horses	number.	7, 326	2, 045, 225
Apparel and slops			19, 511, 055
Arms and ammunition:			
Fire-arms (small)	number.	164, 615	1, 529, 255
Gunpowder	pounds.	11, 598, 200	1, 443, 625
Of all other kinds			5, 116, 045
Bags, empty	dozens.	3, 663, 541	3, 535, 460
Beer and ale	barrels.	420, 290	7, 913, 665
Biscuit and bread	cwts.	181, 092	2, 590, 845
Bleaching materials	do.	1, 550, 400	2, 514, 595
Books, printed	do.	122, 955	5, 582, 685
Butter	do.	39, 225	825, 350
Candles	pounds.	8, 967, 100	1, 009, 595
Caoutchouc, manufactures of			4, 855, 540
Carriages, railway			4, 508, 220
Cement	cwts.	8, 517, 600	4, 310, 260

Aggregate exports from the United Kingdom in 1886—Continued.

BRITISH AND IRISH PRODUCE—Continued.

Articles.	Quantities.	Value.
Cheese.....cwts....	12,922	$255,785
Chemical products and dye-stuffs.....	.....	9,880,200
Clocks and watches.....	.....	1,037,305
Coals, etc.:		
Coals, cinders, and fuel.....tons..	23,283,389	49,186,690
Products of coals, etc.....	.....	3,111,990
Cordage and twine.....cwts..	191,214	1,954,570
Corn:		
Wheat.....do....	118,738	230,695
Wheat-flour.....do....	120,359	307,930
Of other kinds.....	.....	1,441,860
Cotton yarn.....pounds..	254,331,100	57,436,945
Cotton manufactures:		
Piece-goods, white or plain.....yards..	3,497,866,100	161,188,410
Piece-goods, printed, checked, or dyed.....do....	1,351,976,700	89,612,270
Piece-goods of mixed materials.....do....	367,700	57,690
Stockings and socks.....dozen pairs..	1,762,299	2,436,890
Thread for sewing.....pounds..	17,318,700	12,933,825
Thread of other kinds.....	.....	20,607,100
Total.....	.....	286,836,175
Earthen and china-ware.....	.....	9,505,125
Fish, herrings.....barrels..	1,065,931	6,304,780
Fish of other sorts.....	.....	2,387,460
Furniture, cabinet and upholstery wares.....	.....	3,166,035
Glass:		
Plate.....square feet..	4,402,132	2,201,835
Flint.....cwts..	108,506	1,297,030
Common bottles.....do....	750,515	1,780,335
Of other sorts.....do....	146,403	572,685
Haberdashery and millinery.....	.....	10,472,385
Hardware and cutlery.....	.....	14,227,805
Hats.....dozens..	1,133,171	5,432,670
Implements and tools.....	.....	4,147,650
Leather:		
Unwrought.....cwts..	152,267	6,810,030
Wrought.....	.....	7,741,010
Boots and shoes.....dozen pairs..	530,357	1,487,375
Saddlery and harness.....	.....	1,890,470
Linen and jute:		
Linen yarn.....pounds..	15,891,700	4,676,125
Jute yarn.....do....	30,707,300	1,366,575
Linen manufactures:		
White or plain.....yards..	152,218,000	18,964,110
Printed, checked, or dyed.....do....	8,435,400	1,100,020
Sail-cloth and sails.....do....	3,103,000	716,765
Thread, sewing.....pounds..	2,690,500	1,833,870
Other sorts.....	.....	3,681,145
Jute manufactures.....yards..	216,103,100	9,036,610
Machinery:		
Steam-engines.....	.....	15,062,845
Of other sorts.....	.....	35,621,360
Manure.....	.....	8,073,215
Medicines.....	.....	4,071,065
Metals:		
Iron, old, for remanufacture.....tons..	144,860	1,942,450
Pig and puddled.....do....	1,044,552	11,272,485
Bar, angle, bolt, and rod.....do....	242,947	6,865,355
Railroad, of all sorts.....do....	739,603	18,436,910
Wire.....do....	40,341	2,791,915
Hoops, sheets, and boiler-plates.....do....	307,756	15,315,725
Tinned plates.....do....	334,692	22,692,940
Cast or wrought.....do....	353,923	19,285,215
Steel, unwrought.....do....	106,367	7,468,345
Manufactures of steel, or steel and iron.....do....	13,453	2,017,260
Total of iron and steel.....	3,388,494	109,088,690
Copper, unwrought.....cwts..	380,417	4,168,050
Copper, wrought or partly wrought, mixed or yellow metal .do...	397,150	4,066,115
Copper of other sorts.....do....	358,309	4,653,040
Brass.....do....	85,695	1,602,460
Lead.....tons..	42,305	2,933,350
Tin.....cwts..	93,877	2,362,385
Zinc.....do....	167,634	568,345
Musical instruments.....	.....	1,039,210
Oil and floor-cloth.....square yards..	12,880,300	3,443,605

Aggregate export fom the United Kingdom in 1886—Continued.

BRITISH AND IRISH PRODUCE—Continued.

Articles.	Quantities.	Values.
Oil, seed ..... gallons..	17, 669, 100	$7, 511, 730
Painters' colors	.....	6, 330, 515
Paper, other than hanging ..... cwts..	738, 249	6, 778, 975
Pickles, vinegar, and sauces	.....	5, 762, 485
Pictures ..... number..	9, 439	1, 212, 455
Plate and plated ware	.....	1, 841, 960
Provisions	.....	5, 075, 035
Rags and other materials for paper ..... tons..	49, 255	1, 917, 030
Salt ..... do....	804, 807	2, 939, 810
Silk:		
Thrown, twist, and yarn	.....	2, 181, 860
Broad piece-goods ..... yards..	7, 265, 645	7, 203, 945
Other manufactures	.....	3, 959, 020
Total manufactures	.....	11, 162, 965
Skins and furs:		
British	.....	2, 454, 440
Foreign, British dressed ..... number..	1, 625, 256	1, 761, 145
Soap ..... cwts..	426, 904	2, 233, 550
Spirits ..... gallons..	2, 688, 214	4, 506, 800
Stationery, other than paper	.....	4, 267, 725
Sugar, refined ..... cwts..	852, 733	3, 033, 805
Telegraphic wire	.....	4, 963, 335
Umbrellas and parasols	.....	2, 631, 740
Wool, sheep and lambs ..... pounds..	22, 225, 200	4, 663, 520
Woolen and worsted yarn ..... do....	45, 650, 000	22, 054, 130
Woolen and worsted manufactures:		
Cloths, coatings, etc ..... yards..	51, 241, 000	42, 229, 185
Flannels, blanketings, etc ..... do....	18, 112, 300	4, 712, 265
Stuffs ..... do...	196, 601, 800	38, 260, 915
Carpets and druggets ..... do....	11, 646, 600	6, 164, 750
Of other sorts	.....	7, 324, 610
Total manufactures	.....	98, 691, 725
Other articles	.....	53, 061, 585
Total British and Irish	.....	1, 062, 163, 770

FOREIGN AND COLONIAL PRODUCE.

Bacon and hams ..... cwts..	294, 406	$2, 491, 050
Caoutchouc ..... do....	111, 437	6, 519, 400
Chemical manufactures and products	.....	750, 890
Cocoa ..... pounds..	6, 676, 706	1, 143, 910
Coffee ..... cwts..	786, 709	13, 148, 935
Corn:		
Wheat ..... cwts..	1, 080, 922	2, 048, 685
Wheat-meal or flour ..... do....	160, 636	441, 020
Cotton, raw ..... do....	1, 766, 590	19, 877, 835
Cotton manufactures:		
Piece-goods ..... yards..	16, 740, 411	1, 637, 330
Other articles	.....	495, 810
Drugs:		
Bark, Peruvian ..... cwts..	117, 991	2, 738, 970
Opium ..... pounds..	368, 107	1, 079, 340
Unenumerated	.....	1, 816, 990
Dyeing or tanning stuffs:		
Cochineal, granilla, or dust ..... cwts..	11, 303	383, 745
Cutch and gambier ..... tons..	10, 193	1, 280, 035
Indigo ..... cwts..	54, 081	5, 851, 045
Madder, madder root, garancine, and munjeet ..... do	2, 632	17, 345
Feathers, ornamental ..... pounds..	256, 653	2, 191, 980
Fish, cured or salted ..... cwts..	230, 954	2, 018, 820
Flax and hemp:		
Flax, dressed and undressed ..... do....	26, 172	269, 945
Tow or codilla of flax and hemp ..... do....	48, 302	284, 340
Hemp and other like substances (except jute), dressed and undressed ..... cwts..	329, 236	2, 332, 975
Jute ..... do....	1, 883, 285	6, 476, 295
Fruit:		
Currants ..... do....	120, 131	679, 430
Raisins ..... do....	108, 722	809, 530

Aggregate exports from the United Kingdom in 1886—Continued.

FOREIGN AND COLONIAL PRODUCE—Continued.

Articles.	Quantities.	Values.
Fruit—continued.		
Oranges and lemons ..... bushels..	640, 918	$990, 840
Guano ..... tons..	7, 407	259, 645
Gum ..... cwts..	192, 780	3, 170, 380
Hair, manufactures of, and of goats' wool	.....	33, 965
Hides, raw, dry, and wet ..... cwts..	637, 408	10, 152, 835
Leather ..... pounds..	17, 140, 113	6, 922, 525
Metals:		
Copper, unwrought, part wrought, and old ..... tons..	8, 592	1, 860, 150
Iron, in bars ..... do....	73, 450	3, 065, 615
Iron and steel manufactures ..... cwts..	1, 034, 957	2, 772, 160
Tin ..... do....	287, 618	6, 978, 060
Zinc ..... tons..	2, 266	170, 035
Nuts and kernels used for obtaining oil ..... do....	34, 918	1, 897, 745
Oil:		
Palm ..... cwts..	490, 353	2, 858, 925
Cocoanut ..... do ..	98, 450	691, 350
Olive ..... tons .	2, 518	553, 920
Quicksilver ..... pounds..	4, 956, 020	2, 073, 435
Rice ..... cwts..	3, 032, 399	6, 798, 345
Saltpeter ..... do....	24, 578	105, 750
Saltpeter, cubic niter ..... do....	105, 443	265, 135
Seeds:		
Flax or linseed ..... qrs..	189, 894	1, 813, 675
Rape ..... do...	70, 827	579, 040
Unenumerated, used for obtaining oil ..... do....	88, 865	837, 850
Silk:		
Raw ..... pounds..	528, 696	1, 979, 385
Thrown ..... do....	130, 137	371, 785
Manufactures	.....	2, 824, 825
Skins and furs:		
Goats', undressed ..... number..	5, 478, 449	2, 357, 240
Seal ..... do....	11, 265	68, 385
Furs ..... do....	13, 837, 122	3, 564, 245
Spices:		
Cinnamon ..... pounds..	1, 410, 299	254, 550
Pepper ..... do....	20, 104, 092	3, 190, 655
Other sorts ..... cwts..	124, 217	1, 439, 050
Spirits:		
Rum ..... gallons..	1, 453, 947	1, 199, 310
Brandy ..... do....	130, 482	381, 495
Geneva and other spirits ..... do....	777, 005	1, 218, 135
Sugar:		
Refined and candy ..... cwts..	226, 118	903, 780
Unrefined ..... do....	659, 514	2, 284, 385
Molasses ..... do....	67, 822	137, 890
Tallow and stearine ..... do....	218, 570	1, 258, 945
Tea ..... pounds..	44, 931, 020	11, 130, 675
Teeth, elephants', sea-cow, and sea-horse ..... cwts..	6, 074	1, 459, 965
Tobacco:		
Unmanufactured ..... pounds..	5, 840, 084	867, 000
Manufactured, cigars ..... do....	255, 145	773, 785
Other sorts, including snuff ..... do....	1, 030, 705	373, 525
Wine ..... gallons..	1, 142, 287	2, 623, 025
Wool, sheep, lamb, alpaca, and llama ..... pounds..	312, 006, 380	60, 216, 330
Woolen manufactures	.....	2, 601, 210
All other articles	.....	47, 245, 300
Total foreign and colonial	.....	281, 171, 315
Total British and Irish	.....	1, 062, 163, 770
Gross total of exports	.....	1, 343, 335, 085

Principal articles of export from the United Kingdom in 1886 *compared with* 1885.

BRITISH AND IRISH PRODUCE.

Description.	Increase.	Decrease.
Alkali ..... cwts.		419, 000
Animals, horses ..... number.	1, 130	
Arms and ammunition:		
Fire-arms (small) ..... do.		92, 125
Gunpowder ..... pounds.		1, 165, 700
Bags, empty ..... dozens.	94, 312	
Beer and ale ..... barrels.		16, 475
Biscuits and bread ..... cwts.	9, 263	
Bleaching materials ..... do.	42, 800	
Books ..... do.	4, 316	
Butter ..... do.	533	
Candles ..... pounds.	1, 163, 900	
Cement ..... cwts.	1, 159, 700	
Cheese ..... do.	214	
Coals, cinders and fuel ..... tons.		497, 568
Cordage and twine ..... cwts.	14, 086	
Corn:		
Wheat ..... do.	64, 069	
Wheat flour ..... do.	11, 926	
Cotton yarn ..... pounds.	8, 521, 200	
Cotton manufactures:		
Piece goods, white or plain ..... yards.	347, 960, 500	
Piece goods, printed, checked, or dyed ..... do.	127, 552, 900	
Piece goods, mixed materials ..... do.	180, 600	
Stockings ..... dozen pairs.	30, 554	
Thread for sewing ..... pounds.	2, 274, 100	
Fish, herrings ..... barrels.		173, 885
Glass:		
Plate ..... square feet.	515, 238	
Flint ..... cwts.		23, 067
Common bottles ..... do.	18, 533	
Other ..... do.	33, 379	
Hats ..... dozen.	91, 322	
Leather:		
Tanned, unwrought ..... cwts.		31, 720
Wrought, boots and shoes ..... dozen pairs.		29, 952
Linen and jute:		
Linen yarn ..... pounds.		708, 500
Jute yarn ..... do.	4, 500	
Linen manufactures:		
White or plain ..... yards.	14, 031, 400	
Printed, checked, or dyed ..... do.	1, 216, 200	
Sail cloth and sails ..... do.		959, 800
Thread for sewing ..... pounds.	58, 000	
Jute manufactures ..... yards.	1, 024, 600	
Metals:		
Iron, old ..... tons.	59, 624	
Iron, pig and puddled ..... do.	83, 621	
Iron, bar angle, bolt, and rod ..... do.		21, 535
Iron, railroad, all sorts ..... do.	25, 327	
Iron wire ..... do.		15, 752
Iron hoops, sheets, and boiler plates ..... do.		23, 198
Iron, tinned plates ..... do.	36, 306	
Iron, cast or wrought ..... do.	5, 960	
Steel, unwrought ..... do.	105, 886	
Steel, manufactures of, or of iron and steel combined ..... do.	563	
Total of iron and steel ..... do.	257, 812	
Copper, unwrought ..... cwts.	5, 108	
Copper, wrought ..... do.		21, 250
Copper, other sorts ..... do.		63, 172
Brass ..... do.		6, 161
Lead ..... tons.	3, 339	
Tin ..... cwts.	858	
Zinc ..... do.	13, 871	
Oil and floor cloth ..... square yards.	1, 615, 200	
Oil, seed ..... gallons.	1, 085, 400	
Paper, other than hangings ..... cwts.	5, 139	
Pictures ..... number.		1, 976
Rags, and other materials for paper ..... tons.		330
Salt ..... do.		117, 062
Silk manufactures, broad piece-goods ..... yards.	1, 249, 603	
Skins and furs, foreign, British dressed ..... number.		1, 830, 269
Soap ..... cwts.	24, 792	
Spirits ..... gallons.		71, 827
Sugar, refined ..... cwts.		141, 620
Wool, sheep and lambs' ..... pounds.		1, 234, 300
Woolen and worsted yarn ..... do.	2, 158, 400	

Principal articles of export from the United Kingdom, etc—Continued.

BRITISH AND IRISH PRODUCE—Continued.

Description.	Increase.	Decrease.
Woolen and worsted manufactures:		
Cloths, coatings, etc ..... yards..	5, 286, 500	.....
Flannels, blankets, etc ..... do....	980, 000	.....
Stuffs ..... do....	.....	162, 300
Carpets and druggets ..... do....	564, 100	.....

FOREIGN AND COLONIAL MERCHANDISE.

Bacon and hams ..... cwts..	.....	44, 667
Caoutchouc ..... do....	21, 627	.....
Cocoa ..... pounds..	.....	2, 021, 685
Coffee ..... cwts..	39, 138	.....
Corn:		
Wheat ..... do....	354, 424	.....
Wheat flour ..... do....	42, 427	.....
Cotton, raw ..... do....	.....	75, 721
Cotton manufactures, piece-goods ..... yards..	.....	8, 010, 155
Drugs:		
Bark, Peruvian ..... cwts..	5, 551	.....
Opium ..... pounds..	.....	57, 089
Dyeing or tanning stuffs:		
Cochineal, granilla or dust ..... cwts..	.....	957
Catch and gambier ..... tons..	1, 198	.....
Indigo ..... cwts..	.....	16, 555
Madder, madder root, garamine, and munjeet ..... do....	.....	1, 937
Feathers, ornamental ..... pounds..	31, 486	.....
Fish, cured or salted ..... cwts..	34, 153	.....
Flax and hemp:		
Flax, dressed and undressed ..... do....	.....	141
Tow or codilla, of flax and hemp ..... do	.....	15, 753
Hemp and other like substances (except jute), dressed and undressed ..... cwts..	.....	55, 737
Jute ..... do....	.....	96, 348
Fruit:		
Currants ..... do....	.....	64, 499
Raisins ..... do....	.....	2, 610
Oranges and lemons ..... bushels..	233, 888	.....
Guano ..... tons..	.....	216
Gums ..... cwts..	.....	7, 872
Hides, raw, dry, and wet ..... do....	104, 607	.....
Leather ..... pounds..	2, 176, 420	.....
Metals:		
Copper ..... tons..	2, 143	.....
Iron in bars ..... do....	.....	3, 915
Iron and steel manufactures ..... cwts..	80, 917	.....
Tin ..... do....	46, 003	.....
Zinc ..... tons..	4	.....
Nut and kernels used for obtaining oil ..... do....	.....	2, 047
Oil:		
Palm ..... cwts..	100, 468	.....
Cocoanut ..... do....	.....	14, 72?
Olive ..... tons..	.....	303
Quicksilver ..... pounds ..	1, 294, 337	.....
Rice ..... cwts..	.....	100, 326
Saltpeter ..... do....	.....	13, 648
Saltpeter, cubic niter ..... do....	27, 119	.....
Seeds:		
Flax or linseed ..... quarters.	52, 467	.....
Rape ..... do....	.....	21, 345
Unenumerated ..... do ..	.....	92, 688
Silk		
Raw ..... pounds.	145, 624	.....
Thrown ..... do...	53, 788	.....
Skins and furs:		
Goats', undressed ..... number..	457, 278	.....
Seal ..... do...	.....	4, 531
Furs of all sorts ..... do....	.....	1, 021, 393
Spices:		
Cinnamon ..... pounds..	.....	114, 264
Pepper ..... do ..	.....	1, 591, 756
Other sorts ..... cwts.	2, 241	.....

Principal articles of export from the United Kingdom, etc.—Continued.

FOREIGN AND COLONIAL MERCHANDISE—Continued.

Description.	Increase.	Decrease.
Spirits:		
Rum.....gallons..	.....	5,360
Brandy.....do....	8,357	.....
Geneva and others.....do....	.....	114,130
Total of spirits.....do....	.....	111,133
Sugar:		
Refined, and candy.....cwts..	6,579	.....
Unrefined.....do....	229,282	.....
Molasses.....do....	26,643	.....
Tallow and stearine.....cwts..	53,473	.....
Tea.....pounds..	2,274,408	.....
Teeth, elephants', sea-cow, and sea-horse.....cwts..	227	.....
Tobacco:		
Unmanufactured.....pounds..	.....	1,029,910
Manufactured, cigars.....do....	53,320	.....
Other, including snuff.....do....	.....	172,187
Wine.....gallons..	.....	62,164
Wool, sheep, lamb, alpaca, and llama.....pounds..	44,504,705	.....

Imports into the United Kingdom from the United States in 1886 *compared with* 1885.

FOREIGN AND COLONIAL MERCHANDISE.

Articles.	Values.	Increase over 1885.	Decrease from 1885.
Animals:			
Oxen and bulls	$11,354,155	.....	$4,156,735
Sheep and lambs	53,510	.....	95,495
Swine	.....	.....	720
Horses	59,875	.....	4,800
Bacon and hams	31,571,605	.....	820,205
Beef, fresh	8,839,015	.....	2,281,775
Beef, salted	1,529,740	.....	655,970
Butter	803,165	.....	784,470
Butterine	7,840	$7,840	.....
Caoutchouc	129,505	.....	2,620
Cheese	9,187,435	.....	138,385
Clocks	370,090	.....	117,045
Coffee	491,160	17,615	.....
Copper	2,598,895	.....	2,393,635
Corn:			
Wheat	47,594,655	.....	1,805,340
Barley	118,285	.....	140,565
Oats	633,830	.....	1,592,880
Pease	934,750	79,900	.....
Maize	20,469,105	.....	5,743,600
Wheat meal and flour	30,856,815	.....	3,275,175
Oatmeal	580,840	.....	266,490
Cotton:			
Raw	142,777,010	10,249,860	.....
Manufactures	1,068,120	.....	671,140
Fish	2,593,710	46,630	.....
Fruit:			
Apples	2,394,325	189,700	.....
Unenumerated	27,120	19,095	.....
Hides, raw	38,045	.....	390,285
Hops	541,065	.....	1,568,950
Iron and steel manufactures	685,000	.....	176,535
Lard	6,652,335	.....	596,495
Leather	7,097,385	.....	402,695
Manures	1,623,210	.....	68,450
Meat:			
Salted or fresh	8,235	.....	2,605
Preserved	3,321,345	.....	140,515
Mutton, fresh	77,490	.....	383,285
Oils:			
Sperm	58,780	.....	117,695
Train	106,900	23,950	.....
Animal	794,030	.....	124,990
Turpentine	1,918,585	49,505	.....
Chemical, etc	121,405	17,115	.....
Oil-seed cake	7,572,865	360,665	.....

Imports into the United Kingdom from the United States, etc.—Continued.

Articles.	Values.	Increase over 1885.	Decrease from 1885.
Petroleum	$9,969,365	.....	$796,690
Pork, salted	1,477,510	.....	190,695
Rosin	1,438,135	.....	65,690
Seeds, clover and grass	395,275	$70,915	.....
Silver ore	744,515	.....	466,835
Skins and furs	3,167,880	467,885	.....
Sugar:			
Refined	6,149,045	.....	4,205,875
Unrefined	62,710	.....	105,775
Molasses	588,775	86,150	.....
Tallow and stearine	2,168,750	195,805	.....
Tobacco:			
Unmanufactured	10,098,000	250,305	.....
Manufactured	3,311,345	290,210	.....
Wood and timber	6,757,180	.....	1,306,610
Wool, sheep and lambs'	113,040	.....	7,570
All other articles	14,897,630	.....	750,670
Total	408,000,985	.....	24,393,080

Exports from the United Kingdom to the United States in 1886 *compared with* 1885

PRODUCE AND MANUFACTURES OF THE UNITED KINGDOM.

Articles.	Values.	Increase over 1885.	Decrease from 1885.
Alkali	$5,033,615	.....	$98,910
Animals	473,435	$98,210	.....
Apparel	1,510,940	143,255	.....
Arms and ammunition	517,625	.....	99,245
Beer and ale	836,085	126,265	.....
Bleaching materials	1,525,650	101,505	.....
Books	1,469,910	153,270	.....
Cement	1,023,580	394,130	.....
Chemicals and dye-stuffs	2,002,380	24,290	.....
Coal and fuel	748,000	23,675	.....
Cottons	11,517,990	438,165	.....
Earthen and china ware	3,891,610	488,525	.....
Flax and hemp, dressed and undressed	686,695	.....	76,725
Glass manufactures	1,084,645	260,435	.....
Hardware and cutlery	1,617,875	156,070	.....
Hides, raw	505,465	302,070	.....
Jute:			
Yarn	641,495	153,100	.....
Manufactures	4,528,685	319,045	.....
Leather, wrought and unwrought	908,930	.....	57,870
Linen:			
Yarn	223,975	47,600	.....
Manufactures	12,680,930	1,386,145	.....
Machinery	2,575,305	1,122,875	.....
Metals:			
Iron	28,902,900	7,858,480	.....
Copper	134,955	57,170	.....
Tin	137,795	81,805	.....
Manufactures	1,263,775	504,045	.....
Painter's colors, etc	555,955	72,175	.....
Paper, all sorts	332,650	.....	9,430
Pickles, vinegar, etc	886,715	.....	4,195
Provisions	926,895	351,395	.....
Rags and other material for paper making	1,817,015	.....	207,330
Salt	1,072,910	.....	80,020
Silk:			
Thrown, twist, or yarn	530,070	329,655	.....
Manufactures	4,042,080	1,304,580	.....
Skins and furs	3,077,350	247,950	.....
Stationery (not paper)	409,345	34,865	.....
Wool, sheep and lambs'	2,265,710	194,865	.....
Woolen and worsted yarn	1,253,175	723,945	.....
Woolens	20,919,105	5,477,800	.....
Yarn, alpaca and mohair	296,875	11,000	.....
All other articles	9,433,185	1,849,970	.....
Total	134,124,380	24,155,275	.....

Exports from the United Kingdom to the United States, etc.—Continued.

FOREIGN AND COLONIAL PRODUCE.

Articles.	Values.	Increase over 1885.	Decrease from 1885.
Caoutchouc	$3,036,350	$1,929,680	
Chemicals	189,115		$329,570
Coffee	202,335	32,385	
Cotton, raw	448,830		97,230
Cotton manufactures	432,285	173,770	
Drugs	1,323,105		774,425
Dyeing or tanning stuffs	1,516,865		151,910
Feathers	944,085	136,710	
Flax	300,630		52,990
Fruits	1,843,480	534,393	
Gums	934,760		51,630
Hair:			
Goats'	668,255	387,870	
Other	1,001,190	87,385	
Hemp	873,935		384,545
Hides, raw	3,075,060	1,414,870	
Hops	712,900	696,355	
Leather	1,462,195	458,355	
Metals:			
Iron bars, etc	1,390,095	116,610	
Steel, unwrought	275,815	71,860	
Iron and steel manufactures	575,740		154,545
Lead	205,140	187,180	
Tin	4,039,255	957,740	
Precious stones	1,498,315	836,275	
Rags and materials for paper making	1,734,160	250,705	
Rice	287,585		240,535
Seeds	314,300		101,725
Skins and furs	2,445,265		101,325
Spices	1,586,700		50,445
Spirits	181,355	23,365	
Sugar, unrefined	788,385	351,930	
Tea	1,037,860		121,480
Wines	117,470	45,365	
Wool, sheep and lambs'	11,358,830	2,125,860	
Woolen manufactures	261,385	34,305	
All other articles	6,251,635	217,190	
Total	53,914,645	8,410,805	
Total of British and foreign produce	188,039,025	32,566,080	

Trade between the United States and Great Britain and Ireland for ten years ending 1886.

Year.	Exports to the United States.			Imports from the United States.
	Produce and manufactures of Great Britain and Ireland.	Foreign and colonial produce.	Total.	
1877	$81,884,070	$17,545,395	$99,429,465	$389,129,865
1878	72,760,380	14,899,140	87,659,520	445,730,850
1879	101,609,950	25,983,995	127,593,945	459,091,475
1880	154,279,355	35,491,605	189,770,960	535,406,300
1881	148,981,490	34,933,745	183,915,235	516,039,145
1882	154,850,735	38,692,480	193,543,215	441,763,065
1883	136,864,840	46,797,690	183,662,530	496,194,800
1884	122,133,180	41,559,485	163,692,665	431,392,705
1885	109,969,105	45,503,840	155,472,945	432,394,065
1886	134,124,380	53,914,645	188,039,025	408,000,985

Value of declared exports from the consular district of London, England, to the United States during the four quarters of the year ending September 30, 1887.

Articles.	Quarter ending—				Total for the year.
	Dec. 31, 1886.	Mar. 31, 1887.	June 30, 1887.	Sept. 30, 1887.	
Beer, wine and spirits	$179,700.15	$176,125.64	$148,486.48	$79,489.72	$583,801.99
Books and stationery	278,460.89	207,977.63	350,097.83	329,901.10	1,175,437.52
Chemicals, soda, etc	45,346.19	222,036.23	119,556.13	53,203.69	440,142.24
Clothing	41,481.96	40,751.86	39,649.80	29,370.92	151,254.54
Diamonds	509,080.04	995,215.44	891,589.85	870,167.18	3,266,052.51
Dry goods, silks, woolens, cottons, laces, etc	378,093.07	844,354.48	422,040.49	827,292.16	2,472,280.20
Feathers	118,510.47	138,202.69	282,561.54	145,673.32	684,948.02
Hops	149,342.47	4,277.93	12,409.87		166,030.27
Iron, steel, metals, etc	3,039,056.92	3,726,581.10	4,352,446.24	3,454,463.12	14,572,527.38
Leather, hides, skins, furs, etc	641,935.66	706,109.68	1,086,167.65	1,069,510.18	3,503,723.17
Machinery and hardware	5,277.76	7,295.15	8,307.62	9,445.42	30,325.95
Rags and paper waste	79,057.79	47,036.48	39,566.11	45,020.10	210,680.48
Raw silk			879.62		879.62
Seeds	37,844.14	17,482.73	14,864.03	6,460.80	76,651.70
Tea	242,267.20	351,309.54	159,796.49	36,053.50	789,426.73
Wool	356,829.70	442,863.66	409,343.04	821,766.39	2,030,802.79
Miscellaneous	5,991,419.47	6,463,742.78	4,613,511.26	8,676,545.18	25,745,218.69
Total in United States, gold	12,093,703.88	14,391,842.99	12,900,274.05	16,454,362.88	55,900,183.80
Total for preceding year	11,884,845.23	12,634,094.38	12,328,773.76	14,785,209.82	51,632,923.19
Increase	208,858.65	1,757,748.61	631,500.29	1,669,153.06	4,267,260.61

Value of declared exports from this consulate-general to the United States for the years 1886 and 1887, also increase or decrease of value in the articles named.

Articles.	1886.	1887.	Increase +; decrease —.	Increase.	Decrease.
				Per cent.	*Per cent.*
Beer, wines, and spirits	$656,597.10	$583,801.99	—$72,795.11		More than 10.75.
Books and stationery	1,332,160.93	1,175,437.52	—156,723.41		More than 11.75.
Chemicals, soda, and drugs	1,846,391.87	440,142.24	—1,406,239.63		More than 76.
Clothing	182,489.26	151,254.54	—31,234.72		More than 17.
Diamonds	3,540,581.19	3,266,052.51	—274,528.68		More than 7.50.
Dry goods	3,888,742.19	2,472,280.20	—1,416,461.99		More than 36.
Feathers	739,687.02	684,948.02	—54,739.00		More than 7.25.
Hops	140,818.60	166,030.27	+25,211.67	More than 17.75	
Iron, steel, etc	12,560,920.27	14,572,527.38	+2,011,607.11	More than 16	
Leather, hides, skins, furs, etc.	4,469,370.69	3,503,723.17	—965,647.52		More than 21.50.
Machinery and hardware.	72,594.55	30,325.95	—42,268.60		More than 58.25.
Rags and paper waste	426,375.95	210,680.48	—215,695.47		More than 50.25.
Raw silk	106,767.65	879.62	—105,888.03		More than 99.
Seeds	167,607.22	76,651.70	—90,955.52		More than 53.50.
Tea	957,975.26	789,426.73	—168,518.53		More than 17.50.
Wool	2,739,773.60	2,030,802.79	—708,970.81		More than 25.50.
Miscellaneous	17,804,079.84	25,745,218.69	+7,941,138.85	More than 44.50	

SUMMARY.

Total for year ending September 30, 1887	$55,900,183.80
Total for year ending September 30, 1886	51,632,923.19
Net total increase	4,267,260.61
Increase in 3 articles	9,977,957.63
Decrease in 14 articles	5,710,697.02
Net total increase	4,267,260.61

Value of exports from the United Kingdom of Great Britain and Ireland to the United States for the year ending September 30, 1887, together with value for preceding year; also column exhibiting decrease or increase for period named.

No.	District.	Staple (if any).	1887.	1886.	Decrease.	Increase.
1	Belfast	Linens	$8,789,274.12	$8,391,933.19		$397,340.93
2	Birmingham	Hardware, cutlery, etc	3,470,503.85	3,218,881.93		251,711.92
3	Bradford	Stuffs	16,554,821.28	18,319,924.26	$1,765,102.98	
4	Bristol	Tin plates and chemicals	533,273.00	463,995.00		69,278.00
5	Cardiff	Tin and terne-plates	3,758,435.38	2,378,539.83		1,379,895.55
6	Cork	Hides and feathers	139,396.30	256,836.22	117,439.92	
7	Dublin	Ale and porter	1,130,616.11	1,032,404.87		98,211.24
8	Dundee	Burlaps and linens	7,220,197.56	6,858,574.36		361,623.20
9	Dunfermline	Linens and cottons	1,790,990.94	1,659,097.14		131,893.80
10	Falmouth	China clay	46,103.13	59,043.13	12,940.00	
11	Glasgow	Thread, cottons, and linens.	7,863,682.55	6,549,455.96		1,314,226.59
12	Gloucester	Tin plates and woolens		140,753.74	140,753.74	
13	Hull	Beer, colors, etc	281,673.44	249,066.87		32,606.57
14	Leeds	Woolens and cottons	5,854,348.67	5,179,506.35		674,842.32
15	Leith	Books	805,151.75	843,961.62	38,809.87	
16	Liverpool	Tin plates, chemicals, etc.	32,801,068.76	33,532,938.68	731,869.92	
17	London	Metals, etc	55,900,183.80	51,632,923.19		4,267,260.61
18	Londonderry	Whisky		4,235.91	4,235.91	
19	Manchester	Cottons	10,781,705.59	11,281,578.09	499,872.50	
20	Newcastle-on-Tyne.	Chemicals, sodas, etc	3,451,490.86	1,940,896.69		1,510,594.17
21	Nottingham	Lace goods	5,862,050.70	5,731,355.84		130,694.86
22	Plymouth	Live stock	133,132.40	97,866.35		35,266.05
23	Sheffield	Hardware and cutlery	4,120,579.96	2,546,092.71		1,574,487.24
24	Southampton	Live stock	7,371.55	6,437.48		934.07
25	Tunstall	Earthenware	3,445,178.61	3,136,018.95		309,159.66
	Total		174,741,320.30	165,512,318.36	3,311,024.84	12,540,026.78

SUMMARY.

Total for year ending September 30, 1887	$174,741,320.30
Total for year ending September 30, 1886	165,512,318.36
Net total increase	9,229,001.94
Increase in 17 consulates	$12,540,026.78
Decrease in 8 consulates	3,311,024.84
Net total increase	9,229,001.94

Value of declared exports from the various consular districts of the United Kingdom of Great Britain and Ireland to the United States, from October 1, 1877, to September 30, 1887.

[Compiled at the Consulate-General, London.]

Districts.	Year ending Sept. 30—	Amount.	Districts.	Year ending Sept. 30—	Amount.
Belfast	1878	$6,243,226.62	Bradford	1878	$5,693,799.37
	1879	7,328,156.19		1879	5,955,287.85
	1880	9,415,832.81		1880	10,731,646.49
	1881	7,856,100.68		1881	7,091,394.18
	1882	9,412,627.07		1882	8,385,638.20
	1883	8,136,805.43		1883	9,463,444.93
	1884	6,842,100.73		1884	13,601,042.51
	1885	7,800,096.65		1885	11,565,989.95
	1886	8,391,933.19		1886	18,319,924.26
	1887	8,789,274.12		1887	16,554,821.28
		80,216,153.49			107,362,989.02
Birmingham	1878	2,309,513.42	Bristol	1878	168,648.20
	1879	2,435,271.89		1879	164,552.24
	1880	4,920,433.58		1880	157,177.01
	1881	4,376,611.92		1881	137,978.32
	1882	5,178,118.16		1882	166,304.00
	1883	4,719,827.19		1883	274,557.33
	1884	3,977,812.16		1884	202,126.51
	1885	2,875,388.26		1885	399,655.00
	1886	3,218,881.93		1886	463,995.00
	1887	3,470,503.85		1887	533,273.00
		37,482,452.36			2,566,276.62

Value of declared exports from the various consular districts of the United Kingdom of Great Britain and Ireland to the United States, etc.—Continued.

Districts.	Year ending Sept. 30—	Amount.	Districts.	Year ending Sept. 30—	Amount.
Cardiff	1878	$296,903.74	Glasgow	1878	$4,249,000.00
	1879	607,331.57		1879	5,298,345.00
	1880	1,824,512.07		1880	9,219,927.88
	1881	2,148,560.56		1881	9,723,231.70
	1882	2,368,766.84		1882	10,219,715.60
	1883	1,672,831.14		1883	9,662,722.89
	1884	4,373,767.29		1884	7,381,874.93
	1885	3,785,602.65		1885	5,285,319.35
	1886	2,378,539.83		1886	6,549,455.96
	1887	3,758,435.38		1887	7,863,682.55
		23,215,551.07			75,453,275.86
Cork	1878	53,203.07	Gloucester	1878	(*)
	1879	83,016.01		1879	(*)
	1880	308,024.93		1880	195,880.38
	1881	179,255.02		1881	256,572.62
	1882	124,517.28		1882	143,991.74
	1883	86,395.52		1883	198,171.52
	1884	71,631.23		1884	212,375.36
	1885	65,254.28		1885	154,930.79
	1886	256,836.22		1886	140,753.74
	1887	139,396.30		1887	(†)
		1,367,529.86			1,302,676.15
Dublin	1878	583,162.66	Hull	1878	(‡)
	1879	702,218.46		1879	131,683.09
	1880	1,029,415.77		1880	547,247.23
	1881	1,172,754.17		1881	272,353.48
	1882	976,981.35		1882	384,164.81
	1883	903,478.07		1883	371,324.57
	1884	937,414.91		1884	459,468.67
	1885	781,782.04		1885	433,112.51
	1886	1,032,404.87		1886	249,066.87
	1887	1,130,616.11		1887	281,673.44
		9,250,228.41			3,130,094.67
Dundee	1878	$4,641,560.47	Leeds	1878	1,411,370.59
	1879	5,112,470.82		1879	1,556,965.96
	1880	8,224,285.20		1880	3,615,338.09
	1881	7,381,189.83		1881	2,839,801.07
	1882	7,892,926.82		1882	4,776,336.87
	1883	7,917,358.37		1883	4,508,734.53
	1884	7,666,359.66		1884	5,377,193.16
	1885	6,335,495.71		1885	3,884,045.99
	1886	6,858,574.86		1886	5,179,506.35
	1887	7,220,197.56		1887	5,854,348.67
		69,250,418.80			39,003,641.28
Dunfermline	1878	1,009,002.88	Leith	1878	611,810.09
	1879	1,443,045.32		1879	868,939.12
	1880	2,160,227.76		1880	548,321.12
	1881	1,889,286.45		1881	587,578.90
	1882	2,404,535.68		1882	735,938.67
	1883	2,139,489.62		1883	906,710.92
	1884	1,846,596.28		1884	903,868.76
	1885	1,598,759.89		1885	895,903.50
	1886	1,659,097.14		1886	843,961.62
	1887	1,790,990.94		1887	805,151.75
		18,031,031.91			7,297,684.45
Falmouth	1878	55,036.64	Liverpool	1878	19,084,235.15
	1879	67,233.47		1879	23,062,247.11
	1880	132,469.40		1880	42,589,566.16
	1881	76,517.79		1881	29,119,805.55
	1882	108,013.53		1882	34,781,520.69
	1883	53,684.43		1883	32,594,517.92
	1884	104,732.18		1884	28,728,569.10
	1885	98,655.54		1885	26,677,507.59
	1886	59,043.13		1886	33,532,938.68
	1887	46,103.13		1887	32,801,068.76
		801,509.24			302,971,976.71

* Hitherto an agency of the Bristol consulate. † Now an agency of the Bristol consulate.
‡ Hitherto an agency of the Leeds consulate.

Value of declared exports from the various consular districts of the United Kingdom of Great Britain and Ireland to the United States, etc.—Continued.

Districts.	Year ending Sept. 30—	Amount.
London	1878	$19, 416, 581. 34
	1879	24, 420, 872. 05
	1880	62, 681, 120. 18
	1881	50, 549, 973. 44
	1882	54, 240, 152. 97
	1883	48, 015, 188. 59
	1884	46, 003, 504. 86
	1885	37, 323, 547. 79
	1886	51, 632, 923. 19
	1887	55, 900, 183. 80
		450, 184, 048. 21
Londonderry	1878	1, 797. 66
	1879	2, 133. 92
	1880	2, 610. 03
	1881	1, 552. 93
	1882	169, 918. 81
	1883	2, 816. 81
	1884	2, 016. 97
	1885	1, 401. 35
	1886	4, 235. 91
	1887	(*)
		188, 484. 39
Manchester	1878	8, 176, 886. 53
	1879	8, 814, 443. 92
	1880	15, 236, 381, 28
	1881	12, 148, 327. 29
	1882	14, 383, 407. 28
	1883	14, 564, 425. 85
	1884	13, 479, 474. 91
	1885	10, 583, 050. 34
	1886	11, 281, 578. 09
	1887	10, 781, 705. 59
		119, 449, 681. 08
Newcastle-on-Tyne	1878	793, 289. 86
	1879	1, 018, 306. 44
	1880	2, 328, 551. 69
	1881	2, 635, 311. 35
	1882	2, 994, 655. 69
	1883	2, 459, 253. 23
	1884	2, 202, 483. 25
	1885	1, 940, 896. 69
	1886	5, 451, 490. 86
	1887	3, 451, 490. 86
		21, 610, 450. 91
Nottingham	1878	3, 062, 216. 71
	1879	4, 421, 233. 42
	1880	7, 137, 796. 16
	1881	8, 467, 304. 18
	1882	9, 774, 548. 65
	1883	8, 381, 569. 89
Nottingham—C't'd.	1884	$6, 536, 813. 48
	1885	5, 288, 572. 34
	1886	5, 731, 355. 84
	1887	5, 862, 050. 70
		64, 663, 461. 37
Plymouth	1878	21, 473. 92
	1879	10, 611. 34
	1880	88, 154. 94
	1881	59, 130. 95
	1882	89, 117. 46
	1883	152, 014. 43
	1884	245, 987. 15
	1885	90, 727. 70
	1886	97, 866. 35
	1887	133, 132. 40
		987, 316. 64
Sheffield	1878	2, 140, 443. 49
	1879	2, 723, 943. 18
	1880	5, 189, 692. 84
	1881	5, 955, 769. 89
	1882	6, 217, 748. 54
	1883	3, 947, 766. 91
	1884	3, 069, 771. 88
	1885	2, 186, 745. 21
	1886	2, 546, 092. 71
	1887	4, 120, 579. 95
		38, 098, 554. 60
Southampton§	1878	44, 536. 28
	1879	64, 189. 22
	1880	34, 532. 49
	1881	43, 938. 87
	1882	90, 365. 87
	1883	99, 396. 63
	1884	148, 558. 88
	1885	5, 974. 05
	1886	6, 437. 48
	1887	7, 371. 55
		545, 301. 32
Tunstall	1878	2, 604, 681. 77
	1879	2, 687, 476. 73
	1880	3, 703, 344. 73
	1881	3, 815, 760. 65
	1882	3, 419, 833. 88
	1883	4, 075, 490. 69
	1884	2, 850, 551. 83
	1885	2, 809, 865. 56
	1886	3, 136, 018. 95
	1887	3, 445, 178. 61
		32, 548, 703. 60

* Included in returns from Belfast consulate.

§ This amount represents the exports for the September quarter of 1878. The other three quarters were embodied in the returns of the Consulate-General at London, of which Southampton was during that period an agency.

SUMMARY.

1878	$82, 760, 380. 46
1879	98, 479, 994. 32
1880	191, 973, 290. 22
1881	158, 786, 061. 80
1882	179, 439, 846. 41
1883	165, 207, 987. 61
1884	157, 314, 696. 65
1885	132, 713, 595. 89
1886	165, 512, 318. 36
1887	174, 741, 320. 30
Gross total for the ten years ending September 30, 1886	1, 506, 929, 492. 02

Recapitulation for the ten years ending September 30, 1887.

London	$450,184,018.21	Dunfermline	$18,031,031.91
Liverpool	302,971,976.71	Dublin	9,250,228.41
Manchester	119,449,681.08	Leith	7,297,684.45
Bradford	107,362,989.(2	Hull*	3,130,094.67
Belfast	80,216,153.49	Bristol	2,566,276.62
Glasgow	75,453,275.86	Cork	1,367,529.86
Dundee	69,250,418.80	Gloucester†	1,302,676.15
Nottingham	64,663,461.37	Plymouth	937,316.64
Leeds	39,003,641.28	Falmouth	801,509.24
Sheffield	38,098,554.60	Southampton	545,301.32
Birmingham	37,482,452.36	Londonderry‡	188,484.39
Tunstall	32,548,703.60		
Cardiff	23,215,551.07	Total	1,506,929,492.02
Newcastle	21,610,450.91		

* These figures represent only the declared value of exports for the nine years ending September 30, 1887, those for the previous year being embodied in the report from Leeds, of which consulate Hull was then an agency.

† These figures represent only the declared value of exports for the seven years ending September 30, 1886, those for the years 1878, 1879, and 1887 being embodied in the reports from Bristol, of which consulate Gloucester was then, and is again, an agency.

‡ These figures represent only the declared value of exports for the nine years ending September 30, 1886, Londonderry being now embodied in the report from Belfast.

Recapitulation for the year ending September 30, 1887.

London	$55,900,183.80	Tunstall	$3,445,178.61
Liverpool	32,801,068.76	Dunfermline	1,790,990.94
Bradford	16,554,821.28	Dublin	1,130,616.11
Manchester	10,781,705.59	Leith	805,151.75
Belfast	8,789,274.12	Bristol	533,273.00
Glasgow	7,863,682.55	Hull	281,673.44
Dundee	7,220,197.56	Cork	139,396.30
Nottingham	5,862,050.70	Plymouth	133,132.40
Leeds	5,854,348.67	Falmouth	46,103.13
Sheffield	4,120,579.95	Southampton	7,371.55
Cardiff	3,758,435.38		
Birmingham	3,470,593.85	Total	174,741,320.30
Newcastle	3,451,490.86		

Value of declared exports from the various consular districts of the United States of America in the United Kingdom of Great Britain and Ireland for the four quarters of the year ending September 30, 1886.

Districts.	Quarters ending—				Total for year.
	Dec. 31, 1885.	Mar. 31, 1886.	June 30, 1886.	Sept. 30, 1886.	
Belfast	$2,055,668.83	$2,331,411.32	$1,547,447.20	$2,457,405.84	$8,391,933.19
Birmingham	762,091.62	745,445.91	778,912.80	912,431.60	3,218,881.93
Bradford	4,544,418.74	4,770,700.56	4,189,412.64	4,815,397.32	18,319,924.26
Bristol	217,939.00	73,309.00	81,126.00	91,621.00	463,995.00
Cardiff	858,608.12	190,790.06	728,897.24	600,244.41	2,378,539.83
Cork	57,632.61	52,011.37	37,757.85	109,434.39	256,836.22
Dublin	268,347.22	264,253.80	253,354.00	246,449.85	1,032,404.87
Dundee	1,657,454.07	1,742,010.32	1,589,582.59	1,869,527.38	6,858,574.36
Dunfermline	400,817.74	451,220.72	290,830.47	516,228.21	1,659,097.14
Falmouth	25,553.18	14,558.55	9,621.98	9,309.42	59,043.13
Glasgow	1,889,711.06	1,536,311.30	1,310,819.31	1,872,614.29	6,549,45 .96
Gloucester	39,486.70	42,861.12	31,243.44	27,162.48	140,753.74
Hull	72,687.65	63,531.15	62,902.59	49,945.48	249,066.87
Leeds	1,079,963.84	1,263,727.22	1,218,782.08	1,617,033.21	5,179,506.35
Leith	203,523.44	219,912.07	190,814.27	229,711.84	843,961.62
Liverpool	8,517,940.85	8,753,048.90	9,005,612.80	7,256,336.18	33,532,938.68
London	11,684,845.23	12,634,094.38	12,328,773.76	14,785,209.82	51,632,923.19
Londonderry	461.54	3,023.86	649.29	101.22	4,235.91
Manchester	2,080,386.79	3,324,990.89	2,520,595.70	3,355,604.71	11,281,578.09
Newcastle	337,613.96	624,924.02	532,247.29	446,111.42	1,940,896.69
Nottingham	1,301,196.68	1,742,190.78	1,056,061.93	1,631,906.45	5,731,355.84
Plymouth	12,664.47	20,396.00	26,272.77	38,533.11	97,866.35
Sheffield	614,616.83	593,573.93	629,938.79	707,963.16	2,546,0 2.71
Southampton	1,281.94	2,660.74	1,778.69	716.11	6,437.48
Tunstall	649,140.64	780,500.93	833,961.80	872,415.58	3,136,018.95
Total	39,484,047.75	42,231,458.90	39,257,397.28	44,539,414.43	165,512,318.36

Value of declared exports at the various consular districts of the United States in the United Kingdom for the four quarters of the year ending September 30, 1887.

[Compared with the corresponding quarter of the previous year; see foregoing tabular statement.]

Districts.	Quarters ending—				Total for year.
	Dec. 31, 1886.	Mar. 31, 1887.	June 30, 1887.	Sept. 30, 1887.	
Belfast	$2,157,879.14	$2,472,876.39	$1,757,414.46	$2,401,114.13	$8,789,274.12
Birmingham	807,374.32	764,876.89	876,912.60	1,021,430.04	3,470,593.85
Bradford	4,102,382.13	4,008,984.42	3,711,630.70	4,731,824.03	16,554,821.28
Bristol	123,065.00	130,860.00	123,423.00	155,925.00	533,273.00
Cardiff	887,634.60	1,052,522.80	844,581.59	973,696.39	3,758,435.38
Cork	80,875.93	7,598.83	11,760.32	39,161.22	139,396.30
Dublin	354,988.05	247,501.54	249,267.03	278,859.49	1,130,616.11
Dundee	1,709,463.17	1,844,008.03	1,594,658.89	1,982,067.47	7,220,197.56
Dunfermline	416,534.16	548,778.13	262,250.55	563,428.10	1,790,990.94
Falmouth	16,921.35	3,670.81	17,768.08	7,742.89	46,103.13
Glasgow	1,679,461.55	1,838,762.44	2,087,299.14	2,258,156.42	7,863,682.55
Gloucester*	.....	.....	.....	.....	.....
Hull	66,873.11	91,839.48	64,313.89	58,646.96	281,673.44
Leeds	1,383,185.32	1,531,149.19	1,364,682.29	1,575,331.87	5,854,348.67
Leith	208,963.60	195,443.95	200,198.13	200,546.07	805,151.75
Liverpool	8,073,286.52	7,586,254.11	8,770,347.27	8,371,180.86	32,801,068.76
London	12,093,703.88	14,391,842.99	12,960,274.05	16,454,362.88	55,900,183.80
Londonderry*	.....	.....	.....	.....	.....
Manchester	2,616,256.53	2,947,432.08	2,316,149.20	2,901,867.78	10,781,705.59
Newcastle	738,689.91	810,433.35	728,581.51	1,173,786.09	3,451,490.86
Nottingham	1,290,673.64	1,683,117.78	1,017,049.92	1,871,209.36	5,862,050.70
Plymouth	22,089.31	28,441.92	49,606.17	32,995.00	133,132.40
Sheffield	880,488.70	1,001,467.28	1,100,068.49	1,138,555.48	4,120,579.95
Southampton	1,671.88	2,877.48	1,490.90	1,331.29	7,371.55
Tunstall	775,446.48	798,086.87	913,432.49	958,212.77	3,445,178.61
Total	40,577,908.28	43,988,816.76	41,023,160.67	49,151,434.59	174,741,320.30

*Gloucester and Londonderry are now embodied with the returns of Bristol and Belfast, respectively.

December 31, 1886	$40,577,908.28
December 31, 1885	39,484,047.75
Increase	1,093,861.53
March 31, 1887	43,988,816.76
March 31, 1886	42,231,458.90
Increase	1,757,357.86
June 30, 1887	41,023,160.67
June 30, 1886	39,257,397.28
Increase	1,765,763.39
September 30, 1887	49,151,434.59
September 30, 1886	44,539,414.43
Increase	4,612,020.16
Increase:	
December quarter (nearly 3 per cent.)	1,093,861.53
March quarter (more than 4 per cent.)	1,757,357.86
June quarter (nearly 4½ per cent.)	1,765,763.39
September quarter (more than 10¼ per cent.)	4,612,020.16
Total increase for year ending September 30, 1887 (more than 5¼ per cent.)	9,229,002.94

SHIPPING.

The report on shipping submitted by E. R. Jones, our consul at Cardiff, a recognized authority in this country on the subject, shows, among other important matters, the amount of tonnage building at present in the various ship-building yards of the Kingdom.

While the statistics for 1886, with which this report deals, undoubtedly exhibit a discouraging condition of English maritime commerce,

it is pleasant to know, as it has been stated before, that the returns for 1887, which have not been authoritatively issued, will show a general and substantial improvement.

Eighty-seven per cent. of the tonnage entered and cleared during 1886 at the custom-houses of the United Kingdom carried the English flag.

The principal ship-building ports of the country, and in their order of importance, are Glasgow, Newcastle-on-Tyne, Sunderland, Belfast, Southampton, Liverpool, and London. The whole tonnage of vessels built during the year in the Kingdom was 309,276 tons, the total number of vessels 736, of which 371 were sailing and 365 steam.

The record of the wrecks and casualties during 1885—the latest published and obtainable—though sufficiently appalling, is not as bad as that of 1884. During the year 1,431 persons—62 passengers and 1,369 crew—perished, and 558 vessels of 219,857 tons burden were totally lost. It is to be hoped that the continued efforts being made in this country for the security of life at sea will still further reduce the perils of the ocean.

Tonnage of steam-vessels of each nationality entered and cleared with cargoes and in ballast at ports in the United Kingdom from and to foreign countries and British possessions.

Flag.	Entered.				Cleared.			
	1885.	1886.	Increase over 1885.	Decrease from 1885.	1885.	1886.	Increase over 1885.	Decrease from 1885.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Austrian	23,154	15,466	.....	7,688	20,029	19,876	.....	153
Belgian	282,378	304,157	21,779	.....	274,364	314,867	40,503	.....
British	19,747,938	19,791,481	43,543	.....	20,046,224	20,250,706	204,482	.....
Danish	444,607	458,608	10,001	.....	464,461	465,324	863	.....
Dutch	643,978	632,190	.....	11,788	645,190	651,294	6,104	.....
French	740,416	699,612	.....	40,804	738,579	696,515	.....	42,064
German	1,348,611	1,216,709	.....	131,902	1,357,509	1,247,076	.....	110,433
Italian	54,105	29,365	.....	24,740	47,875	34,712	.....	13,163
Norwegian	290,087	288,703	.....	1,384	285,307	298,750	13,443	.....
Russian	52,487	37,208	.....	15,279	46,487	39,165	.....	7,322
Spanish	434,080	444,093	10,013	.....	451,962	460,221	8,259	.....
Swedish	366,294	369,152	2,858	.....	386,299	387,528	1,229	.....
United States	23,626	28,403	4,777	.....	21,602	26,458	4,856	.....
Other countries	131,105	95,662	.....	35,443	137,113	100,392	.....	36,721
Total	24,586,866	24,410,809	.....	176,057	24,923,001	24,992,884	69,883	.....

Tonnage of sailing and steam vessels of each nationality entered and cleared with cargoes and in ballast at ports in the United Kingdom from and to foreign countries and British possessions.

Flag.	Entered.				Cleared.			
	1885.	1886.	Increase over 1885.	Decrease from 1885.	1885.	1886.	Increase over 1885.	Decrease from 1885.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Austrian	90,618	54,465	.....	36,153	97,527	58,027	.....	39,500
Belgian	283,465	204,473	21,008	.....	277,511	316,253	38,742	.....
British	22,980,464	22,741,061	.....	239,403	23,408,591	23,337,238	.....	71,353
Danish	721,590	719,909	.....	1,681	765,720	743,766	.....	21,954
Dutch	739,024	733,411	.....	5,613	740,692	753,559	12,867	.....
French	938,594	893,281	.....	45,313	939,132	889,471	.....	49,661
German	1,995,687	1,746,575	.....	249,112	2,011,735	1,789,351	.....	222,384
Italian	363,580	264,458	.....	99,122	360,169	273,387	.....	86,782
Norwegian	1,958,586	1,922,033	.....	36,553	1,976,162	1,926,827	.....	49,335
Russian	244,594	216,769	.....	27,825	240,211	212,847	.....	27,364
Spanish	454,883	468,907	14,524	.....	475,432	483,159	7,727	.....
Swedish	696,535	677,110	.....	19,425	711,815	708,966	.....	2,849
United States	255,615	193,048	.....	62,567	264,738	199,220	.....	65,518
Other countries	139,685	100,118	.....	39,567	149,787	113,388	.....	36,399
Total	31,862,420	31,035,618	.....	826,802	32,419,222	31,805,459	.....	613,763

Tonnage of British and foreign vessels (sailing and steam) entered and cleared with cargoes and in ballast at the principal ports in the United Kingdom from and to foreign countries and British possessions.

Port.	Entered.				Cleared.			
	1885.	1886.	Increase over 1885.	Decrease from 1885.	1885.	1886.	Increase over 1885.	Decrease from 1885.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Cardiff	2,381,606	2,303,786	12,180	.....	4,567,662	4,174,950	.....	392,712
Glasgow	922,927	913,037	.....	9,890	1,385,574	1,369,622	.....	15,952
Hull	1,651,648	1,673,783	22,135	.....	1,343,725	1,324,585	.....	19,140
Liverpool	5,173,330	5,017,815	.....	155,515	4,822,021	4,714,654	.....	107,367
London	6,902,655	6,810,647	.....	92,008	5,146,482	5,215,984	69,502	.....
Newport	840,269	885,331	45,062	.....	1,160,723	1,279,131	118,408	.....
Southampton	911,172	841,032	.....	70,140	822,155	752,050	.....	70,165
Sunderland	786,019	707,977	.....	78,042	971,344	891,899	.....	79,445
Swansea	540,353	541,295	942	.....	767,785	726,511	.....	41,274
Tyne ports	2,730,399	2,753,425	23,026	.....	4,249,824	4,242,076	.....	7,748
Other ports	9,022,042	8,497,490	.....	524,552	7,181,927	7,113,977	.....	67,570
Total	31,862,420	31,035,618	.....	826,802	32,419,222	31,805,459	.....	613,763

Number and net tonnage of sailing and steam vessels built in the United Kingdom in 1886, exclusive of vessels built for foreigners.

Division.	Iron.						Steel.					
	Sailing.		Steam.		Total.		Sailing.		Steam.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
England	61	49,851	86	40,910	147	90,761	7	390	61	57,338	68	57,728
Scotland	31	41,194	32	2,812	63	44,006	27	23,865	89	43,257	116	67,122
Ireland	1	1,292	4	1,201	5	2,493	5	7,512	5	8,658	10	16,170
Total United Kingdom	93	92,337	122	44,923	215	137,260	39	31,767	155	109,253	194	141,020

Number and net tonnage of steam vessels built in the United Kingdom in 1886—Continued.

Division.	Wood.						Total.*					
	Sailing.		Steam.		Total.		Sailing.		Steam.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
England	209	12, 991	19	303	228	13, 294	280	63, 578	167	98, 558	447	162, 136
Scotland	13	792	9	148	22	940	72	65, 855	131	46, 217	203	112, 072
Ireland	5	125	1	4	6	129	11	8, 929	10	9, 863	21	18, 792
Total United Kingdom	227	13, 908	29	455	256	14, 363	363	138, 362	308	154, 638	671	293, 000

* Including composite vessels.

NOTE.—In addition to the vessels built for mercantile purposes there were 12 steel steam-vessels of 5,559 tons net and 13,102 tons gross, and 2 steam composite vessels of 416 tons net and 740 tons gross, built by private firms for Her Majesty's navy, and 1 steam steel vessel of 227 tons net and 318 tons gross for Her Majesty's war office.

Number and net tonnage of sailing and steam vessels built at ports in the United Kingdom for foreigners in 1886.

Class.	No.	Tons.
War:		
Steam	17	840
Mercantile:		
Sailing	8	6, 887
Steam	40	30, 801
Total	48	37, 688
Total sailing	8	6, 887
Total steam	57	31, 641
Grand total	65	38, 528

Number and tonnage of vessels of the United Kingdom employed in the home and foreign trades and the number of persons employed therein.*

Class.	No.	Tons.	Persons employed.		
			British.	Foreign.	Total.
1886.					
Sailing	12, 997	3, 232, 232	71, 233	13, 997	85, 415
Steam	4, 920	3, 911, 865	91, 381	11, 186	119, 055
Total	17, 917	7, 144, 097	162, 614	25, 183	†204, 470
1885.					
Sailing	13, 775	3, 319, 563	75, 844	15, 124	90, 968
Steam	5, 016	3, 889, 600	95, 741	12, 072	107, 813
Total	18, 791	7, 209, 163	171, 585	27, 196	198, 781
1884.					
Sailing	13, 876	3, 258, 330	76, 374	15, 009	91, 383
Steam	4, 868	3, 825, 614	95, 497	12, 774	108, 271
Total	18, 744	7, 083, 944	171, 871	27, 783	199, 654

* Masters of vessels are not included in these totals.
† Including Lascars and Asiatics.

Number and tonnage of vessels belonging to the United Kingdom totally lost (exclusive of vessels of the Royal navy), and number of passengers and crew lost.

SAILING.

Year.	Vessels.	Tons.	Number of persons lost.		
			Crew.	Passengers.	Total.
1884	462	111,321	981	91	1,072
1885	424	114,235	875	24	899
Increase +, or decrease −	−38	+2,194	−106	−67	−173

STEAM.

1884	153	114,067	422	145	567
1885	134	105,622	494	38	532
Increase +, or decrease−	−29	−8,445	+72	−107	−35

SUMMARY.

1884	615	225,388	1,403	236	1,639
1885	558	219,857	1,369	62	1,431
Increase +, or decrease	−57	−5,531	−34	−174	−208

AGRICULTURE.

The agricultural returns herein given for the year ending June 4, 1887, are of more than ordinary interest. They show, notwithstanding the general depression, that the uncultivated acreage in England and Wales is 18,533 less than in 1881—a fact resulting, it is thought, from reduction of rents and from the occupation by owners in the absence of tenants.

In Ireland, however, there were 82,000 less acres under cultivation in 1887 than in the year previous, the disturbed state of the country being undoubtedly the cause.

Notwithstanding the increased acreage under permanent pasture, the stock of cattle is 2½ per cent. less than in 1885 and 3 per cent. less than in 1886. This decrease is attributed to the protracted severity of the winter and the scarcity of "keep" in the following spring. The same reason is given for the unusual shrinkage in the yield of milk and the make of cheese and butter.

Experimental cultivation of tobacco in different parts of the Kingdom is still carried on, but the general impression among practical men is that the production will never be of any commercial importance.

In this connection attention is called to the tabulated comparison of prices of meat and provisions. A reduction has taken place since 1885 in every article mentioned, except cheese and butter, and the reason for this exception has been already suggested. The fall, varying from 6 to 17 per cent. in the price of dead meat, must seriously affect the foreign meat trade of the United States.

Total acreage under all kinds of crops, bare fallow, and grass.

	1887.	1886.	Increase over 1886.	Decrease from 1886.
	Acres.	*Acres.*	*Acres.*	*Acres.*
Corn crops	9,735,400	9,878,787	.....	143,387
Green crops	4,716,679	4,726,452	.....	9,773
Clover, grasses, and permanent pasture	32,725,685	32,555,660	170,025	.....
Flax	133,904	130,933	2,971	.....
Hops	63,709	70,127	.....	6,418
Bare fallow or uncropped arable land	498,992	570,280	.....	71,288
Total	47,874,369	47,932,239	.....	57,870

Acreage under each kind of crop, bare fallow, and grass.

CORN CROPS.

Crops.	1887.	1886.	Increase over 1886.	Decrease from 1886.
	Acres.	*Acres.*	*Acres.*	*Acres.*
Wheat	2,387,518	2,357,894	29,624	.....
Barley	2,255,256	2,432,749	.....	177,493
Oats	4,418,947	4,418,959	.....	12
Rye	65,947	66,599	.....	652
Beans	377,306	387,346	.....	10,010
Peas	230,426	215,240	15,186	.....
Total	9,735,400	9,878,787	.....	143,387

GREEN CROPS.

Potatoes	1,367,125	1,364,350	2,775	.....
Turnips and swedes	2,282,152	2,312,648	.....	30,496
Mangolds	403,397	387,828	15,569	.....
Carrots	19,655	20,002	.....	347
Cabbage, rape, etc.	203,583	197,838	5,745	.....
Vetches	440,767	443,786	.....	3,019
Total	4,716,679	4,726,452	.....	9,773

LIVE STOCK.

Animals.	1887.	1886.	1887 compared with 1886.	
			Increase.	Decrease.
Horses	1,936,925	1,927,527	9,398	.....
Cattle	10,639,960	10,872,811	.....	232,851
Sheep	29,401,750	28,955,240	446,510	.....
Pigs	3,720,937	3,497,165	223,792	.....
Total	45,099,592	45,252,743	446,849	.....

Average price of dead meat and provisions imported into the United Kingdom.

Description.	1886.	1885.	Increase +; Decrease —.
Beef, fresh ..... per cwt..	$11.21	$12.63	—$1.42
Beef, salted ..... do....	8.06	9.20	—1.14
Mutton, fresh ..... do....	10.46	12.61	—2.15
Pork, fresh ..... do....	12.02	12.75	—.73
Pork, salted ..... do....	7.21	7.82	—.61
Bacon ..... do....	9.16	9.85	—.69
Hams ..... do....	11.53	12.37	—.84
Lard ..... do....	8.37	8.96	—.59
Butter ..... do....	25.65	.....	.....
Margarine ..... do....	16.21	.....	.....
Cheese ..... do....	10.84	10.78	+.06
Eggs ..... per 120 lbs..	1.62	1.70	—.08
Potatoes ..... per cwt..	1.42	1.52	—.10

Average wholesale prices of live meat per stone of 8 pounds, sinking the offal, at the Metropolitan cattle market.

Description.	1886.	1885.
Beef:		
Foreign	$0.75 to $1.03	$0.93 to $1.15
British	.79 to 1.15	1.13 to 1.27
Mutton:		
Foreign	.91 to 1.30	.99 to 1.22
British	1.01 to 1.46	1.09 to 1.38
Veal:		
Foreign	.81 to 1.24	1.07 to 1.26
British	.83 to 1.26	1.07 to 1.30
Pork, British	.97 to 1.22	.97 to 1.26
Lamb, British	.61 to 1.09	.79 to 1.03

FISHERIES.

For the first time, the fishery statistics of England and Wales have been collected in a systematic and satisfactory manner in 1886. The Irish statistics, however, are still incomplete.

On the English and Welsh coasts there were taken 6,412,433 cwts. of fish, valued at $18,440,395, not including shell-fish, valued at $1,344,980. The average wholesale price of fish at place of landing was 2½ cents per pound. Turbot sold for 13 cents, soles 18½ cents, salmon 27 cents per pound. The lower prices of cod, ling, mackerel, haddock, herring, etc., produce the average.

The total quantity of fish taken on the coasts of Scotland was 4,718,000 cwts., of the value of $7,016,955. The value of shell-fish, not included in the above, was $364,340. To this should be added $5,000,000, the enhanced value of fish when cured, and also $1,670,000, the value of salmon caught, not appearing in table.

The aggregate weight of fish, exclusive of shell-fish, taken on the coasts of the United Kingdom is estimated to have been 600,000 tons, of the value of $32,500,000. The value of fish exported from the United Kingdom, as appears elsewhere, was $3,601,395 over the value of fish imported. It is calculated that the value of the fish taken on coasts of the Kingdom is doubled before reaching the wholesale inland market, and the value, apart from the cost of retailing it, is not less than $65,000,000 per year.

It is gratifying to observe that the number of fishermen lost by wrecks and casualties in 1886 was scarcely one-half as large as in 1884.

Statement showing the quantity and value of fish landed on the English and Welsh coasts in 1886.

Fish.	Quantity.	Value.	Average wholesale price.
	Cwts.		*Per lb.*
Turbot	59,850	$913,325	$0.13
Soles	98,078	2,137,260	.185
Other prime fish	370,014	1,845,445	.04
Total prime fish	527,942	4,896,030	.08
Salmon	15,066	477,465	.27
Cod	248,197	963,550	.03
Ling	57,870	192,245	.03
Haddock	1,243,325	2,210,740	.015
Mackerel	265,290	888,720	.03
Herrings	1,973,637	2,346,830	.01
Pilchards	353,334	212,435	.005
Sprats	148,318	69,250	.005
All other, except shell-fish	1,579,454	6,183,130	.03
Total	6,412,433	18,440,895	.025
Shell-fish:	*No.*		*Per doz.*
Lobsters	452,097	93,060	2.41
Crabs	2,863,359	196,810	.79
Oysters	45,554,000	675,280	.16
	Cwts.		*Per lb.*
Other shell-fish	289,009	377,830	.02
Total	.....	1,344,980	.....
Total value of fish	.....	19,785,375	.....

Statement showing the quantity and value of fish landed on the Scotch coasts in 1886.

Fish.	Quantity.	Value.	Average wholesale price.
	Cwts.		*Per lb.*
Turbot	3,765	$48,553	$0.105
Soles	7,584	46,885	.045
Salmon	.....	.....	.....
Cod	343,834	627,880	.015
Ling	131,701	238,060	.015
Haddock	670,972	1,634,415	.02
Mackerel	2,893	9,440	.03
Herrings	3,103,284	3,613,270	.01
Sprats	21,988	18,595	.01
Sparling	176	2,120	.10
Torsk (tusk)	9,701	8,835	.01
Saith (coal-fish)	105,683	77,910	.01
Whiting	75,021	141,760	.015
Halibut	29,778	113,005	.03
Flounder, plaice, and brill	81,134	251,155	.03
Eel	7,230	21,135	.025
Skate	51,043	52,280	.01
All other, except shell-fish	71,758	108,055	.015
Total	4,718,145	7,016,955	.015
Shell fish:	*No.*		*Per doz.*
Lobsters	777,700	152,565	2.29
Crabs	2,365,600	66,935	.32
Oysters	295,700	6,480	.25
	Cwts.		
Mussels	257,022	72,195	.005
Clams	12,236	8,875	.01
Other	60,999	57,290	.01
Total	.....	364,340	.....
Total value of fish	.....	7,381,295	.....

Number of boats and men and boys employed in sea fisheries in the United Kingdom.

Division.	Boats.	Men and boys.
England	8,447	46,594
Scotland	12,498	48,793
Ireland	7,152	24,584
Isle of Man	386	2,864
Channel Islands	271	1,769
Total	28,754	124,604

Statement showing the number of fishermen lost at sea from fishing vessels belonging to the United Kingdom.

Causes of death.	1884.	1885.	1886.	Total.
By wreck or casualties:				
Founderings	23	31	20	74
Strandings	4	11	5	20
Collisions	28	13	4	45
Other casualties	51	36	46	133
Missing vessels	86	42	18	146
Total	192	133	93	418
Fell overboard	37	38	31	106
Fell overboard when drawing water	5	3	2	10
Washed overboard	25	15	22	62
Killed or knocked overboard by tackle, etc	17	11	11	39
Drowned from small boat	16	2	2	20
Drowned when fish ferrying	.....	4	8	12
Natural causes	6	10	8	24
Suicides	2	2	1	5
Total	108	85	85	278
Total number of fishermen lost	300	218	178	696

MINES.

Following the general depression it is not surprising to find that the mineral production of the United Kingdom in 1886 is the lowest total for fifteen years, showing a decrease for the year of $21,427,265, and 7 per cent. less than in 1885. The decrease in the output of coal was 1,832,936 tons, and in value $4,867,390. The decrease in pig-iron manufactured was 405,715 tons, and in value $1,413,986.

Quantities and value of coal and metals produced in the United Kingdom.

Description.	1886.	1885.	1886.	1885.
	Tons.	*Tons.*		
Coal	157,518,482	159,351,418	$190,729,650	$205,697,040
Pig-iron	7,009,754	7,415,469	79,443,875	86,513,805
Fine copper	1,471	2,773	327,315	677,075
Metallic lead	39,482	37,687	2,613,250	2,167,000
White tin	9,312	9,331	4,717,910	4,169,015
Zinc	8,989	9,778	705,675	730,500
Silver from lead	*325,427	*320,520	315,255	324,690
Other metals	.....	.....	.....	70
Total	.....	.....	278,852,930	300,279,195

* Ounces.

BANKRUPTCIES.

The number of receiving orders in bankruptcy in 1886 was 4,816, or 483 more than were made in the year previous. The following table shows the gradual increase in such orders since 1884:

Year.	Total cases.	Increase on previous year.	
		Number.	Per cent.
1884	4,170	.....	.....
1885	4,333	163	3.91
1886	4,816	483	11.15
Total increase since 1884	.....	646	15.49

Notwithstanding the increase in the number of bankruptcies the amount of liabilities was $5,619,590 less than in 1885. The large majority of the total bankruptcies, as will hereafter more fully appear, occurred among small retail traders.

The inspector-general in bankruptcy in accounting for the increase of adjudications during the year cites the case of a firm which had sold during the thirteen years of their existence material (coal and iron) valued at over $4,000,000, and another in the same trade which in nine years sold $12,500,000, below the cost of production, thus compelling ruinous competition, making many like failures, differing from these only in degree, in the same trade.

The inspector-general further suggests that the cause of a great deal of the present suffering in trade is the abuse of credit, an evil which has mostly grown up in the last twenty years, and by means of which debtors are enabled to carry on business long after their resources are exhausted, at the risk and cost of their creditors.

Number of receiving orders gazetted in the principal trades and occupations in 1885 *and* 1886.

Trade.	1886.	1885.	Trade.	1886.	1885.
Grocers	365	317	Milliners	29	27
Farmers	332	206	Saddlers and harness-makers	29	30
Publicans and hotel-keepers	331	285	General dealers	29	22
Builders	255	239	Timber merchants	29	28
Boot and shoe manufacturers and dealers	187	151	School masters and mistresses	25	18
Tailors	132	125	Carriage-builders	25	24
Drapers, haberdashers, etc	125	123	Stone-masons, etc	24	21
Bakers	104	85	China dealers, etc	24	18
Decorators, painters, etc	100	88	Tobacconists	23	34
Butchers	81	48	Contractors	22	19
Agents, commission and general	80	112	Fishing net and smack owners, etc.	22	21
Carpenters and joiners	70	64	Wine and spirit merchants	21	36
Jewelers	69	88	Tradesmen's assistants	21	18
Coke and coal merchants and dealers	55	54	Millers	21	12
Clerks, commercial and general	55	54	Hatters	21	20
Corn, etc., merchants and dealers	52	54	Fancy goods manufacturers, etc.	21	2
Engineers and founders	51	35	Architects and surveyors	20	16
Green grocers	51	36	Dairymen, cow-keepers, etc	20	19
Fish-mongers	50	29	Clerks in holy orders	20	15
Iron-mongers	46	48	Lodging-house keepers	20	17
Solicitors	46	41	Blacksmiths	19	22
Provision merchants	44	52	Curriers, tanners, etc	19	25
Cabinet-makers	40	55	Laborers, etc	19	12
Confectioners	38	33	Aerated and mineral water manufacturers	19	14
Chemists	36	23	Woolen merchants, etc	17	20
Travelers, commercial	36	20	Machinists and implement manufacturers	17	20
Clothiers, outfitters, etc	34	28	Book binders, sellers, and publishers	16	17
Merchants	33	53	Gardeners and florists	16	17
Printers and publishers	33	31	Iron and hardware merchants	15	17
Furniture dealers and makers	30	35	Officers, military	15	15
Carriers, etc	30	19			

Number of bankruptcies, total liabilities, assets, etc., in the years 1884–'85–'86.

Year.	No. of cases.	Liabilities.		Assets.		Deficiency.		Proportion of assets to liabilities.	
		Amount.	Decrease since previous year.	Amount.	Decrease since previous year.	Amount.	Decrease since previous year.	Percentage.	Increase since previous year.
1884 ..	4, 170	$69, 949, 975	$36, 390, 780	$20, 079, 990	$9, 857, 730	$49, 869, 985	$26, 533, 050	28. 7	.6
1885 ..	4, 333	45, 188, 945	24, 761, 030	15, 465, 755	4, 614. 235	29, 723, 190	20, 146, 795	34. 2	5. 5
1886 ..	, 4816	39, 569, 355	5, 619, 590	14, 275, 800	1, 189, 955	25, 293, 555	4, 429, 635	36. 1	1. 9

Number of bankruptcies, liquidations, and compositions, with the amount of liabilities and assets, in England and Wales.

NUMBER OF CASES.

Year.	Bankruptcies.	Liquidations.	Compositions.	Total.
1884	2, 998	485	687	4, 170
1885	3, 965	78	290	4, 333
1886	4, 566	61	189	4, 816

LIABILITIES.

1884	$42, 952, 445	$17, 278, 025	$9, 719, 505	$69, 949, 975
1885	37, 484, 060	3, 737, 855	3, 967, 030	45, 188, 945
1886	33, 364, 335	2, 961, 765	3, 243, 255	39, 569, 355

ASSETS.

Year.	Bankruptcies.	Liquidations.	Compositions.	Total.	Percentage of total assets to liabilities.
1884	$10, 960, 055	$4, 657, 295	$4, 462, 640	$20, 079, 990	28. 7
1885	12, 078, 090	1, 918, 020	1, 469, 645	15, 465, 755	34. 2
1886	10, 506, 490	2, 409, 875	1, 359, 435	14, 275, 800	36. 1

Estimated annual loss to creditors in England and Wales through bankruptcy proceedings in 1884–'85–'86.

Year.	Assets.						Total liabilities.	Net estimated loss to creditors.
	Liquidation.	Bankruptcies.	Total.	Amount after deduction of one-third for expense of realizations.	Compositions.	Total assets for dividends.		
1884...	$4, 657, 295	$10, 960, 055	$15, 617, 350	$10, 411, 570	$4, 462, 640	$15, 374, 215	$69, 949, 975	$54, 575, 760
1885...	1, 918, 020	12, 078, 090	13, 996, 110	9, 330, 740	1, 469, 645	10, 800, 385	45, 188, 945	34, 388, 560
1886...	2, 409, 875	10, 506, 490	12, 916, 365	8, 610, 910	1, 359, 435	9, 970, 345	39, 569, 355	29, 599, 010

REVENUE.

The public revenue for the year ending March 31, 1887, amounted to $453,863,790, and the expenditure to $449,983,760, leaving a surplus of $3,880,030. The expenditure was $11,135,460 less and the income $5,857,285 more than in the previous year. Excise produced nearly 28, customs 22, and the property and income tax about 17 per cent. of this total. The balance was obtained, as the tables show, in miscellaneous receipts.

There was a reduction made in the income tax of a penny in the pound. A penny income tax produces upwards of $7,500,000. The present income tax is 7 pence (14 cents) in the pound. The duty on tobacco was reduced 8 cents per pound.

Customs produced $100,775,000 or 22 per cent of the total income. There was an increase on the duty collected on tea of $1,638,100; spirits, $326,990; on tobacco and snuff, $340,980; on dried fruits, $144,495; and a decrease of duties collected on wine of $332,910 and on coffee of $66,605.

In this connection tables are given showing the minimum rate of interest charged by the Bank of England in each month for five years, and the amounts cleared at the London bankers' clearing-house for the same period.

Public revenues and expenditures of Great Britain and Ireland for the year ending March 31, 1887.

Debit.		Credit.	
For funded and unfunded debt	$139,790,115	Customs	$100,775,000
Issues on account of friendly societies deficiencies	100,000	Excise licenses	126,250,000
Civil list and civil charges	96,632,395	Stamps (inland revenue)	59,150,000
Army	92,146,360	Land tax and house duty	14,900,000
Navy	66,327,005	Property and income tax	79,500,000
Localization of military forces	369,330	Post-office	42,250,000
Annuity under "Indian army pension deficiency act, 1885"	750,000	Telegraph service	9,150,000
		Crown lands	1,850,000
Total	396,115,205	Interest on advances for local works, and on purchase money of Suez Canal shares	5,880,960
Charges for collection of revenue	53,868,555	Stamps in lieu of fees	3,570,195
Balance in hand March 31, 1887	3,880,030	Receipts by civil department, etc.	10,587,635
Gross total	453,863,790	Gross total	453,863,790

Amount of revenue collected from customs for year ending March 31, 1887.

Articles.	Amount.	Articles.	Amount.
Tea	$22,574,370	Miscellaneous receipts	$145,025
Coffee	950,170		
Spirits, foreign and colonial	21,096,355	Total*	100,679,275
Wine	5,640,365	Charges of collection	4,746,080
Tobacco and snuff	46,835,930		
Currants, raisins, and dried fruits	2,638,450	Net total	95,933,195
Other imported articles	803,610		

* This total does not include balances outstanding on March 31, 1887.

Average minimum rate per cent. of discount charged by the Bank of England in each month from 1882 *to* 1886.

Month.	1882.	1883.	1884.	1885.	1886.
January	5 1/16	4 1/2	3	5	3 1/2
February	5 1/16	3 1/2	3 1/16	5	2 1/2
March	4	3	3 3/16	3 1/16	2
April	3	3	2 1/2	3 1/2	2
May	3	3 1/16	2 1/2	2 5/16	2 1/2
June	3	4	2 1/2	2	2 1/2
July	3	4	2	2	2 1/2
August	3 1/2	4	2	2	2 1/2
September	4 7/16	3 1/2	2	2	3 1/2
October	5	3	2 1/2	2	3 1/2
November	5	3	4 1/2	2 1/16	4
December	5	3	5	3 1/16	4 1/2
Average for the year	4 1/2	3 5/16	2 13/16	3	3

Amounts cleared at the London bankers' clearing-house in the last five years.

Years.	Amount.	Years.	Amount.
1882	$31,105,000,000	1885	$27,555,000,000
1883	29,645,000,000	1886	29,510,000,000
1884	28,995,000,000		

RAILWAYS.

During the year there were constructed 163 miles of railway in the United Kingdom, making the total mileage 19,332 miles. Capital was increased $62,500,000, making the aggregate paid-up capital on the 31st December, 1886, $4,141,721,270.

The whole number of passengers conveyed on the lines was 725,584,390, about 4 per cent. more than in the year previous. The increase of receipts, $2,359,580, was received almost entirely from third-class passenger fares.

The depression in trade is shown in the decrease of upwards of $2,500,000 in the carrying traffic of goods. While the number of employés has been about the same the working expenditure of the railways of the Kingdom is $1,348,550 less than the year before. A considerable part of this reduction is due to fewer accidents to passengers and less damage to freight, and these results are secured by the more general use of the "block system" and continuous brakes.

The inter-locking system of signals and point levers is now in use on 92 per cent. of the railways in England, 79 per cent. in Scotland, and 52 per cent. in Ireland. On over 82 per cent. of all passenger cars in the Kingdom continuous brakes are now fitted.

During the year the statistics show that only one in every 7,637,730 passengers was killed, and only one in every 540,674 injured.

The average return on capital invested in railways was 4 per cent., in tram-ways 5 per cent.

Total length, paid-up capital, and traffic of railways in the United Kingdom.

ENGLAND AND WALES.

Year.	Length of line open.	Paid-up capital.	Number of passengers conveyed.	Weight of goods and minerals conveyed.
				Tons.
1885	13,612	£3,385,900,810	622,169,944	218,748,094
1886	13,678	3,438,849,110	641,502,033	216,311,997
Increase + or decrease −, compared with 1885	+66	+52,948,300	+19,332,089	−2,436,097

SCOTLAND.

1885	2,982	515,401,520	55,922,425	34,812,844
1886	3,022	522,976,785	65,362,092	34,669,389
Increase + or decrease −, compared with 1885	+40	+7,575,265	+9,439,667	−143,455

IRELAND.

1885	2,575	177,987,945	19,120,662	3,727,516
1886	2,632	179,895,375	18,720,265	3,645,257
Increase + or decrease −, compared with 1885	+53	+1,907,430	−400,397	−82,259

TOTAL UNITED KINGDOM.

1885	19,169	4,079,290,275	697,213,031	257,288,454
1886	19,332	4,141,721,270	725,584,390	254,626,643
Increase + or decrease −, compared with 1885	+163	+62,430,995	+28,371,359	−2,661,811

Receipts and working expenses of railways in the United Kingdom.

[Increase (+) or decrease (−) compared with 1885.]

Year.	Gross receipts.				Working expenditure.	Net receipts.
	Passenger traffic.	Goods traffic.	Miscellaneous.	Total.		
England and Wales:						
1885	£126,913,475	£156,588,555	£13,102,495	£296,604,525	£157,374,245	£139,230,280
1886	128,856,180	154,089,735	13,442,225	296,388,140	156,106,835	140,281,305
	+1,942,705	−2,498,820	+339,730	−216,385	−1,267,410	+1,051,025
Scotland:						
1885	14,401,900	21,527,020	1,237,765	37,166,685	18,811,075	18,355,610
1886	14,955,820	21,411,735	1,227,660	37,595,215	18,852,820	18,742,395
	+553,920	−115,285	−10,105	+428,530	+41,745	+386,785
Ireland:						
1885	7,549,735	6,244,150	213,775	14,007,660	7,754,465	6,253,195
1886	7,412,690	6,350,725	212,995	13,976,410	7,631,580	6,344,830
	−137,045	+106,575	−780	−31,250	−122,885	+91,635
Total United Kingdom:						
1885	148,865,110	184,359,725	14,554,035	347,778,870	183,939,785	163,839,085
1886	151,224,690	181,852,195	14,882,880	347,959,765	182,591,235	165,368,530
	+2,359,580	−2,507,530	+328,845	+180,895	−1,348,550	+1,529,445

Number of persons killed or injured on the railways of the United Kingdom in 1886.

	England and Wales.		Scotland.		Ireland.		United Kingdom.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers:								
From accidents to trains, rolling stock, etc	2	534	.....	38	6	43	8	615
By accidents from other causes, want of caution, etc	78	689	9	35	.....	3	87	727
Servants:								
From accidents to trains, rolling stock, etc	2	56	2	13	.....	12	4	81
By accidents from other causes, want of caution, etc	335	1,726	66	183	20	20	421	1,929
Other persons:								
While passing over railways and level crossings	75	24	4	.....	2	1	81	25
Trespassers	161	70	35	19	9	2	205	91
Suicides	70	.....	10	.....	.....	.....	80	.....
Miscellaneous	41	62	4	7	7	2	52	71
Total	764	3,161	150	295	44	83	938	3,539

Number of persons killed or injured while on railway companies' premises by accidents in which the movement of vehicles used exclusively by railway companies was not concerned in 1886.

From all causes.	England and Wales.		Scotland.		Ireland.		United Kingdom.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Passengers	3	249	.....	2	.....	.....	3	251
Servants	33	3,438	1	35	.....	7	34	3,480
Persons on business at stations and others	13	135	1	1	.....	1	14	137
Total	49	3,822	2	38	.....	8	51	3,868

Amount of compensation paid by railway companies of the United Kingdom for personal injury to passengers and for loss or damage of goods in 1886.

Division.	Passengers.	Goods.
England and Wales	$750,040	733,540
Scotland	70,485	68,365
Ireland	134,920	27,870
Total	955,445	829,775

Number of men employed in various occupations and number of fatal accidents and injuries to each class in 1886.

Class of servants.	Number employed.	Number killed and injured.		Proportion to number employed.	
		Killed.	Injured.	Killed.	Injured.
Brakemen and goods guards	7,407	43	409	1 in 192	1 in 18
Gatekeepers	1,605	5	3	1 in 321	1 in 535
Permanent waymen	37,810	92	145	1 in 411	1 in 261
Firemen	12,795	18	195	1 in 711	1 in 65
Engine-drivers	12,874	8	143	1 in 1,609	1 in 90
Porters and shunters	48,070	88	572	1 in 546	1 in 84
Inspectors	3,518	6	17	1 in 586	1 in 207
Passenger guards	5,902	2	59	1 in 2,951	1 in 100
Ticket collectors, etc	2,060	2	2	1 in 1,030	1 in 1,030
Pointsmen and signalmen	19,012	11	39	1 in 1,728	1 in 487
Laborers	70,405	37	72	1 in 1,902	1 in 977
Station masters	6,165	6	6	1 in 1,027	1 in 1,027
Mechanics	55,940	9	24	1 in 6,213	1 in 2,331

Total length, paid-up capital, traffic receipts, and working expenses of tramways in the United Kingdom.

[Increase (+) or decrease (—) compared with 1885.]

Year.	Length of line open.	Paid-up capital.	Number of passengers conveyed.	Gross receipts.	Working expenses.	Net receipts.
England and Wales:						
1885	656	$48,410,580	288,320,756	$10,471,380	$8,006,350	$2,465,030
1886	706	51,091,880	302,790,839	10,554,590	8,196,950	2,357,640
	+50	+2,681,300	+19,470,083	+83,210	+190,600	−107,390
Scotland:						
1885	70	$5,429,359	61,488,106	$1,705,450	$1,210,875	$494,575
1886	73	5,503,725	59,528,415	1,679,500	1,218,465	461,035
	+3	+169,375	−1,909,691	−25,950	+7,590	−33,540
Ireland:						
1885	85	$5,248,000	19,943,445	$890,360	$660,670	$229,690
1886	86	5,256,915	21,838,270	917,600	692,365	225,235
	+1	+8,915	+1,894,825	+27,240	+31,695	−4,455
Total United Kingdom:						
1885	811	$59,087,930	364,702,307	$13,067,190	$9,877,895	$3,189,295
1886	865	61,947,520	384,157,524	13,151,690	10,107,780	3,043,910
	+54	+2,879,590	+19,455,217	+84,500	+229,885	−145,385

POST-OFFICE.

There have been so many important changes for the public good in the post-office during the year, especially in regard to the parcel post, registered letters and insurance service, that a brief review of the whole system is herein submitted.

Estimated number of letters, etc., delivered in the United Kingdom during the twelve months ended March 31, 1887.

Description.	Number.	Increase, per cent.	Average number to each person.
Letters	1,459,900,000	4.0	40
Post-cards	180,100,000	5.1	5
Book packets and circulars	368,900,000	7.8	10
Newspapers	151,200,000	2.4	4
Total	2,160,100,000	4.6	59
Parcels	32,860,000	24.3	1
Grand total	2,192,960,000	4.9	60

Of the total number of letters, etc., delivered, about 84 per cent. were delivered in England and Wales (28 per cent. in London alone), 9 per cent. in Scotland, and 6 per cent. in Ireland.

The number of registered letters was 10,779,555, a decrease of 3.1 per cent. This continued decrease is chiefly due to the extended use of postal-orders for purposes of remittance.

In the parcel post service the reduction of the rates and extension of weights has had a marked effect on the business. The total number of parcels posted during the year was 32,860,154, an increase of upwards of 24 per cent. on the previous year, apportioned thus: England and Wales, 27,237,000; Scotland, 3,430,000; Ireland, 2,193,000.

The parcel post has been extended to over 55 colonies and foreign countries. The total number of parcels dispatched to the colonies and foreign countries was 242,864, and the number received was 150,656.

A system of insurance and compensation in case of loss or damage of registered letters and parcels for fees of 2 and 4 cents each was commenced on May 1, 1886, and up to March 31, 1887, 105,677 registered letters and 264,741 parcels had been insured, the fees on which amounted to $9,809, and the amounts paid in compensation to $769.

The number of letters, etc., received in the returned-letter office was 14,215,900; an increase of upwards of 9 per cent. Of these letters posted without any address 1,628 contained money and checks amounting to $23,020.

SAVINGS BANKS.

On the 31st December, 1862, the total amount, inclusive of interest standing to the credit of depositors, was $8,491,105. On the 31st of December, 1886, it was $254,371,190. The increase over the year 1885 was $15,882,500.

The following table gives the total amount received from and paid

to depositors in the post-office savings banks and the computed capital of those savings banks in 1886:

Items.	England and Wales.	Scotland.	Ireland.	United Kingdom.
Received	$77,317,130	$1,924,675	$5,090,405	$84,332,210
Paid	63,184,065	1,499,760	3,765,890	68,449,715
Capital	235,582,440	5,273,870	13,515,375	254,371,685

The sum credited to depositors for interest was $5,847,950, an increase of $387,390 over the previous year.

The number of accounts remaining open at the end of the year was 3,731,421, distributed as follows:

Division.	Number.	Proportion to population.	Average balance due to each depositor.
England and Wales	3,452,355	1 to 8	$66.40
Scotland	131,873	1 to 30	38.93
Ireland	147,193	1 to 33	89.35

MONEY-ORDERS.

The scale of commission on inland money-orders was changed on September 1, 1886. The old scale comprised eleven denominations, varying from 4 cents for an order not exceeding $2.50 to 24 cents for an order not exceeding $50. The present scale has only five denominations, which range from 4 cents for an order not exceeding $5 to 12 cents for an order not exceeding $50, thus reducing the maximum charge from 24 cents to 12 cents. This change has had a satisfactory result, as, instead of the usual large annual decrease both in amount and number of inland orders, there was an increase last year of $1,436,815 in amount as compared with a falling off of $7,806,770 in the previous year, and the decrease in the number of orders was only 595,731 as compared with a decrease of 1,599,834 in the previous year.

The whole number of inland orders was 9,762,562, and the total amount $111,313,540.

The amount of orders issued in the United Kingdom for payment in foreign countries and the colonies was $3,865,520. Issued in foreign countries and the colonies for payment in the United Kingdom, $11,593,940.

The amount of orders issued for payment in the United States was $566,310. Issued in the United States for payment here, $3,649,700.

POSTAL ORDERS.

The amount of money transmitted in small sums by the means of postal orders during the year was $64,745,000, an increase of $10,845,000. The total number issued was 31,608,711, an increase of 5,818,395.

Taking the money-order and postal-order business together, it appears that the people of the United Kingdom transmit inland, within the course of a year, $175,000,000.

TELEGRAPHS.

The total number of telegrams sent in the year ending March 31, 1887, was 40,137,175, an increase of 10,049,306 compared with the previous twelve months, and the revenue was $6,774,395 compared with $6,388,030; an increase of 33 per cent. in the number of messages and 6 per cent. in the amount of revenue.

The number of railway, press, official, and foreign telegrams sent was over 10,000,000, which is in addition to the above total.

The London local messages show an increase of 50 per cent., the total number being about 3,800,000.

REVENUE AND EXPENDITURE.

The gross revenue of the year was $53,579,890, arrived at thus:

Revenue.	Amount.	Expenditures.	Amount.
Postage on letters, post-cards, etc ..	$40, 932, 595	For postal service, including money and postal order business.....	$26, 266, 680
Commission on money and postal orders	1, 423, 395	For packet service	3, 134, 025
Savings-bank	1, 787, 780	For savings-bank	1, 452, 775
Revenue from telegraphs.....	9, 436, 120	For telegraph service.....	10, 153, 235
		Total	41, 006, 715
		Balance.....	12, 573, 175
Total	53, 579, 890	Total	53, 579, 890

being a decrease of $971,235 on the previous year.

Table showing the total amount received and paid by trustees of savings-banks from and to depositors, and of the computed capital of such savings-banks in 1886.

Items.	England and Wales.	Scotland.	Ireland.	United Kingdom.
Received	$36, 147, 860	$11, 988, 445	$2, 007, 110	$50, 143, 415
Interest credited	4, 823, 720	1, 077, 290	256, 770	6, 157, 780
Paid	40, 370, 605	11, 283, 790	2, 206, 370	53, 860, 765
Capital	182, 414, 425	41, 656, 105	10, 149, 445	234, 219, 975

PATENTS.

The number of patents applied for in 1886 was 17,162, 6½ per cent. more than in the year previous. The number applied for by citizens of the United States was 1,446, 8 per cent. of the whole number and 75 per cent. of foreign applications.

Fifty-four per cent. of the original applications were further extended under the provisions of the English patent law permitting patent rights for different periods.

Applications for patents in 1886.

From residents of—	No.	From residents of—	No.
England and Wales	12,044	New Zealand	31
Scotland	972	New South Wales	18
Ireland	232	Norway	10
United States	1,446	Cape of Good Hope	3
Germany	871	Brazil	5
France	723	West Indies	9
Austria	146	Turkey	5
Belgium	144	South Australia	2
Switzerland	68	South America	10
Canada	127	Egypt	3
Sweden	39	Natal	1
India	38	Newfoundland	2
Italy	38	Nova Scotia	1
Russia	30	Japan	1
Holland	21	Portugal	6
Denmark	20	Other countries	46
Victoria	25		
Spain	25	Total	17,162

POPULATION.

The Registrar-General's report of the births, marriages, and deaths in England and Wales for the year 1886, just published, commands in this country uncommon attention, because it discloses the fact that the marriage rate, which has been constantly decreasing for several years, is now less than it has been since 1838. The marriages registered in 1886 numbered 196,071, a rate of 14.1 persons in every 1,000 of the population, a fall of 3.5 since 1873.

As it appears by a table following, the fluctuations in the marriage rate for several years is coincident with the fall in value per head of British exports and the average price of wheat. The other suggestive fact appearing in the vital statistics of this year more strongly than before is, that the mean ages at marriage have been gradually rising since 1873, the present average age being 26.2 years for bachelors and 24.6 years for spinsters.

Notwithstanding this, under-age marriages are still very numerous. Eighty-one per cent. of the bachelors and 23.6 per cent. of the spinsters married under twenty-one years of age, and 6.2 per cent. of the total number married were minors.

In the newspaper discussions which these statistics have provoked it has been generally claimed that prudence, enforced by hard times, and not immorality, is the cause of the reduced marriage rate and the increased marriage age, and the marked diminution in the number of illegitimate births is cited in proof of this explanation.

The tendency of reform shown in the criminal returns of 1885, and to which especial attention was called in my last report, has strengthened during the year 1886. This fact is most striking in the record of summary proceedings, there having been 44,305, or about 6½ per cent., less than in the year previous. The decrease of 18,082, or about 10 per cent., in the number of arrests for drunkenness will be noticed with pleasure. This general improvement is equally maintained in the different divisions of the United Kingdom.

Total population of each division of the United Kingdom, estimated to the middle of each year (exclusive of the army, navy, and merchant seamen abroad).

Division.	1887.	1886.
England and Wales	28, 247, 151	27, 870, 586
Scotland	3, 991, 499	3, 949, 393
Ireland	4, 852, 914	4, 889, 498
Total	37, 091, 564	36, 709, 477

Population, marriages, births, and deaths in the United Kingdom.

Divisions.	Years.	Numbers.				Proportion per 1,000 of the population.		
		Estimated population.	Persons married.	Births.*	Deaths.*	Persons married.	Births.*	Deaths.*
United Kingdom	1885	36, 831, 119	488, 356	1, 136, 331	688, 065	13.4	31.3	18.9
	1886	36, 709, 477	482, 268	1, 150, 720	693, 190	13.1	31.3	19.0
England and Wales	1885	27, 499, 041	395, 490	894, 270	522, 750	14.4	32.5	19.0
	1886	27, 870, 586	392, 142	903, 866	537, 276	14.1	32.4	19.3
Scotland	1885	3, 907, 736	50, 512	126, 110	74, 603	12.9	32.3	19.1
	1886	3, 949, 393	48, 938	127, 927	73, 622	12.4	32.4	18.6
Ireland	1885	4, 924, 342	42, 354	115, 951	90, 712	8.6	33.5	18.4
	1886	4, 889, 498	41, 188	113, 927	87, 292	8.4	23.3	17.9

* Exclusive of still-born.

Persons married, births, and deaths per 1,000 *of the population in the United Kingdom and in other European countries.*

PERSONS MARRIED TO 1,000 LIVING.

Years.	United Kingdom.	England and Wales.	Scotland.	Ireland.	Denmark.	Norway.	Sweden.	Austria.	Hungary.	Switzerland.	German Empire.	Prussia.	Netherlands.	Belgium.	France.	Italy.
1880	13.6	14.9	13.2	7.8	15.2	13.3	12.6	15.2	18.2	13.7	15.0	15.3	15.0	14.1	14.9	13.8
1881	14.0	15.1	13.9	8.5	15.6	12.8	12.4	16.0	19.8	13.6	14.9	15.2	14.6	14.1	15.0	16.2
1882	14.3	15.5	14.1	8.6	15.4	13.4	12.7	16.4	20.3	13.5	15.3	15.7	14.3	13.9	14.8	15.7
1883	14.3	15.4	14.0	8.5	15.4	13.2	12.8	15.7	20.5	13.6	15.3	15.8	14.2	13.5	15.0	16.0
1884	14.1	15.0	13.5	9.1	15.6	13.7	13.1	15.7	20.1	13.6	15.7	16.1	14.4	13.5	15.3	16.4
1885	13.4	14.4	12.9	8.6	15.1	13.3	13.3	15.2	.....	13.8	15.8	16.3	12.2	13.6	14.9	15.8
1886	13.1	14.1	12.4	8.4	14.2	13.1	.....	15.5	.....	13.7	15.8	16.2	13.9	13.4	14.8	15.6

BIRTHS TO 1,000 LIVING.

1880	32.7	34.2	33.6	24.7	31.8	30.7	29.4	38.7	42.9	29.6	37.6	37.7	35.5	31.1	24.5	33.6
1881	32.5	33.9	33.7	24.5	32.3	30.0	29.1	38.7	43.7	29.8	37.0	36.8	35.0	31.4	24.9	33.0
1882	32.2	33.7	33.3	24.1	32.4	30.9	29.4	38.9	44.6	28.8	37.2	37.4	35.3	31.2	24.8	37.1
1883	31.8	33.3	32.5	23.6	31.8	30.9	28.9	38.2	45.3	28.4	36.6	36.9	34.8	30.5	24.8	37.1
1884	32.1	33.3	33.4	24.0	33.4	31.0	30.0	38.4	46.0	28.1	37.2	37.4	34.9	30.5	24.8	38.7
1885	31.3	32.5	32.3	23.5	32.6	31.3	29.6	37.4	.....	27.5	37.0	37.6	34.4	29.9	24.3	38.1
1886	31.3	32.4	32.4	23.3	32.6	30.9	.....	37.7	.....	27.5	37.1	37.7	34.6	29.6	23.9	36.5

DEATHS TO 1,000 LIVING.

1880	20.4	20.5	20.5	19.8	20.4	15.9	18.1	29.7	38.6	21.9	26.0	25.4	23.5	22.3	22.8	30.5
1881	18.7	18.9	19.3	17.5	18.3	16.8	17.7	30.6	35.6	22.4	25.5	24.8	21.5	20.9	22.0	27.6
1882	19.2	19.6	19.3	17.4	19.3	18.4	17.4	30.8	36.6	21.9	25.7	25.3	20.7	20.2	22.2	27.5
1883	19.3	19.5	20.1	19.2	18.4	17.1	17.3	30.1	32.6	20.3	25.9	25.5	21.8	20.8	22.2	27.5
1884	19.3	19.5	19.4	17.6	18.4	16.4	17.5	29.2	31.4	20.1	26.0	25.5	22.2	20.9	22.2	26.7
1885	18.9	19.0	19.1	18.4	17.9	16.5	17.8	29.9	.....	21.0	25.7	25.7	21.0	20.1	22.0	26.6
1886	19.0	19.3	18.6	17.9	18.2	16.1	.....	29.2	.....	20.4	26.0	26.0	21.8	21.1	22.5	28.3

Marriage rate, British exports and imports, price of wheat, etc.

Years.	Marriage rate.	Value per head of population of United Kingdom.			Average price of wheat per quarter.	Amount cleared at the bankers' clearing house per head of population.
		Exports of British produce.	Imports.	Total exports and imports.		
1860	17.1	$22.97	$35.60	$63.42	$12.95	.....
1870	16.1	31.04	47.22	85.22	11.39	$846.77
1880	14.9	31.60	57.83	98.12	10.30	1,080.36
1881	15.1	32.60	55.31	96.70	11.03	1,182.55
1882	15.5	38.29	56.94	99.19	10.95	1,148.49
1883	15.4	32.76	58.33	100.07	10.11	1,075.49
1884	15.0	31.52	52.78	92.82	8.67	1,041.43
1885	14.4	28.53	49.72	86.03	8.08	973.30
1886	14.1	28.16	46.86	82.00	7.56	1,031.69

Average ages at marriage of bachelors and spinsters, in occupational groups, 1884–'85.

Occupations.	Bachelors.	Spinsters.	Difference between the ages of husband and wife.
Miners	24.06	22.46	—1.60
Textile hands	24.38	23.43	—0.95
Shoemakers, tailors, etc	24.92	24.31	—0.61
Artisans	25.35	23.70	—1.65
Laborers	25.56	23.66	—1.90
Commercial clerks	26.25	24.43	—1.82
Shop-keepers, shop-men	26.67	24.22	—2.45
Farmers and sons	29.23	26.91	—2.32
Professional and independent	31.22	26.40	—4.82

Mortality from the several classes of diseases, 1886.

Causes of death.	Total deaths in 1886.	Rate per million living.						
		1886.	1885.	1884.	1883.	1882.	1881.	Mean, 1871–'80.
Zymotic diseases	73,747	2,648	2,507	3,094	2,639	3,088	2,660	3,724
Parasitic diseases	990	35	30	38	39	37	39	57
Dietetic diseases	1,656	59	59	58	66	68	66	63
Constitutional diseases	92,751	3,330	3,276	3,404	3,407	3,395	3,328	3,594
Developmental diseases	45,103	1,618	1,598	1,374	1,632	1,558	1,582	1,674
Local diseases	276,302	9,915	9,908	9,543	9,890	9,591	9,348	9,920
Violence	17,444	626	625	651	675	669	697	736
Ill-defined and not specified causes	29,283	1,047	1,007	1,149	1,188	1,154	1,160	1,610
All causes	537,276	19,278	19,010	19,511	19,536	19,560	18,880	21,378

Mean relative humidity of the atmosphere for each month of the year ending September, 1887.

[Royal Observatory, Greenwich. W. H. M. Christie, esq., M. A. F. R. S., astronomer royal.]

Month.	Mean relative humidity.*	Month.	Mean relative humidity.*
1886.		1887.	
October	86	March	81
November	89	April	75
December	86	May	80
		June	72
1887.		July	64
January	90	August	67
February	82	September	80

* Complete saturation=100.

Number of emigrants to countries out of Europe.

Destination.	1886.	1885.
British origin:		
Australia and New Zealand	43,076	39,395
British North America	24,745	19,838
United States	152,710	137,687
Other places	12,369	10,724
Total	232,900	207,644
Foreign origin:		
Not stated	97,901	56,741
Total emigrants	330,801	264,385

Number of immigrants of British and foreign nationality that entered the United Kingdom from countries out of Europe.

Year.	British and Irish.	Foreigners.	Not distinguished.	Total.
1885	85,468	27,006	1,075	113,549
1886	80,018	28,474	387	108,879

Average strength of the British army and navy.

Year.	Army.			Navy.		
	At home.	Abroad.	Total.	Seamen.	Marines.	Total.
1885	91,579	106,485	198,064	48,600	12,900	61,500
1886	96,057	105,748	203,805	48,361	13,037	61,398

Effective strength of the army reserve, militia, and yeomanry, and number of volunteers enrolled.

Class.	1885.	1886.
Army reserve	47,024	48,712
Militia and military reserve	119,356	122,428
Yeomanry	11,590	11,499
Volunteers	224,012	226,752
Total	401,982	409,391

Primary schools in the United Kingdom.

Division.	Number of schools inspected.	Number of children that can be accommodated.	Average number of children in attendance.	Number of children present at inspection.
England and Wales, year ending August 31, 1886	19,022	5,145,292	3,438,425	4,064,463
Scotland, year ending September 30, 1886	3,092	691,405	476,890	542,902
Ireland, 1886	8,024	1,071,791	490,484	.....

Amount expended from parliamentary grants in 1886.

England, Wales, and Scotland	$19,010,045
Ireland	4,176,815
Total	23,186,860

The number of paupers (exclusive of vagrants) in receipt of relief in the United Kingdom on a certain day in 1886.

Census taken.	Adult, able-bodied.			All other paupers.			Total.		
	In-door.	Out-door.	Total.	In-door.	Out-door.	Total.	In-door.	Out-door.	Total.
England and Wales, January 2, 1886	26,016	83,911	109,927	168,424	529,282	697,706	194,440	613,193	807,633
Scotland, May 14, 1886	.....	.....	58,898	.....	.....	33,915	.....	.....	92,813
Ireland, end of first week in January, 1886	7,420	.....	7,420	41,145	.....	41,145	48,565	59,951	108,516
Total for United Kingdom	33,436	83,911	176,245	209,569	529,282	772,766	243,005	673,144	1,008,962

Amount expended in relief of the poor in the United Kingdom in 1886.

England and Wales	$41,481,150
Scotland	4,470,385
Ireland	6,441,555
Total	52,393,090

Criminal returns, 1886.

Division.	Committed for trial.			Convicted.	Acquitted.
	Males.	Females.	Total.		
England and Wales	11,763	2,211	13,974	10,686	3,245
Scotland	2,069	375	2,444	1,838	514
Ireland	2,601	427	3,028	1,619	1,286
Total	16,433	3,013	19,446	14,143	5,045

Table showing the cost of the repression of crime in the United Kingdom in 1886.

	England and Wales.	Scotland.	Ireland.	Total.
Police *	$17,857,265	$1,840,520	$7,665,830	$27,363,615
Criminal prosecutions	797,450	Not given.	277,365	1,074,815
Convict prisons †	1,358,255	§564,345	663,380	4,288,820
Prisons ‡	1,682,890			
Reformatories and industrial schools ‖	1,669,965		929,560	2,599,525
Criminal lunatic asylums	150,595	Not given.	639,000	789,595
Coroners' inquests	480,415	Not given.	Not given.	480,415
Total	23,996,835	2,404,865	10,185,085	36,596,785

* Exclusive of superannuation, $1,042,625.
† Deduct value of prisoners' labor, $783,795.
‡ Deduct value of prisoners' labor, $580,730.
‖ Deduct parents' contributions, $76,345.
§ Deduct value of prisoners' labor, $25,600.

LONDON CHARITIES.

An interesting compilation of facts regarding metropolitan charities in London, just issued, shows that there are 1,024 existing organizations for the distribution of private relief, with an aggregate annual income of $21,752,695. Some of these benevolent societies are of great antiquity, but most of them are founded on the generosity of modern times. A study of the statistics on the subject leads to the belief that London, all things considered, is the most charitable city of the world.

In this connection our countrymen may recall with pride the munificent contributions of George Peabody, Julius S. Morgan, and other American merchants and bankers in London to its public charities.

Principal benevolent societies and amount of income.

Societies.	No.	Income.	Societies.	No.	Income.
Missions:			Hospitals—Continued.		
Home	56	$2,799,340	General dispensaries	33	$140,540
Home and foreign	13	1,144,145	Provident	15	51,670
Foreign	24	4,475,045	Institutions:		
Asylums:			Vaccination	2	12,925
Blind	27	356,345	Surgical appliances	6	69,375
Deaf and dumb	8	91,620	Convalescent	45	243,975
Incurables	9	249,015	Nursing	15	21,000
Idiots	3	295,000	Pension	158	2,213,425
Hospitals:			General relief	92	1,898,610
General	17	1,417,095	Food	17	54,900
Consumption	8	296,205	Reform and prevention	70	354,965
Ophthalmic	5	70,185	Educational	98	2,142,695
Orthopedic	3	27,095	Social improvement	45	349,420
Skin	3	31,785	Protection	19	385,960
Women's and children's	21	353,035	Voluntary homes	94	795,400
Lying-in	6	57,725	Orphanages	56	874,720
Miscellaneous and special	30	484,190			

THOMAS M. WALLER,
Consul-General.

U. S. CONSULATE-GENERAL.
London, January 20, 1887.

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